THE BUILDER

VOL. XCIX.—No. 3527. SEPTEMBER 10, 1910.

CONTENTS.

	PAGE
Sea Coast Architecture	281
The Building Trade and Changes in Rates of Wages	282
Notes	282
Architectural Education at Home and Abroad (Part XI.)	283
The Suffolk Institute of Archæology at Sudbury	284
Books	285
The Royal Sanitary Institute at Brighton	288
Competition News	289
Obituary	289
Meeting	290
Correspondence	290
Intercommunication Column	290
London Councils	290
Fifty Years Ago	290
Illustrations:—	
London County Hall	290
Details of Georgian Work in Dublin	290
Foreign and Colonial	290
Monthly Review of Construction:—	
Savoy Hotel Extension	291
Barrow-in-Furness Public Swimming-Baths	293
The Construction of Shop Fronts	294
Strong-Room and Foundations in a Bank Building	296
Notes	296
Projected New Buildings in the Provinces	297
General Building News	297
List of Competitions, Contracts, etc., Open	298
Miscellaneous	300
Patents	301
Prices Current	301
Tenders	302

Illustrations.

New London County Hall. By Mr. Ralph Knott.

Dublin:—10, Henrietta-street. Corner of Room.
9, Henrietta-street. Arch on Landing and Ceiling over Stairs.
86, St. Stephen's-green. Ceiling.

Illustrations in Text.

	PAGE
Building the London County Hall	281
Section of Leaning Tower of Pisa	283
Books:—	
Dublin: No. 8, Ely-place. The Staircase	286
The Campanile, Soleto	287
S. Irene, Lecce	288
Monthly Review of Construction:—	
Savoy Hotel Extension:—	
Fig. 1. General View from Victoria Embankment	291
Fig. 2. Cross Section	291
Figs. 3 and 4	292
Figs. 5 and 6	293
Floating Bathing Station, Ramsden Dock, Barrow-in-Furness. Plan and Section	294
The Construction of Shop Fronts:—	
Figs. 1 to 6	295
Figs. 7 and 8	296
A Bank Strong Room. Sections	296

Building the London County Hall.

SEA COAST ARCHITECTURE.

ALL architecture regarded in relationship to natural scenery demands in its conception a high degree of sympathy with the characteristics of its surroundings.

This matter was made easier for designers of past ages by the compulsion they were under to use local materials, which secured for their buildings a certain degree of harmony with each other and with the settings in which they were placed. In our own day such a practice is not always convenient or economical, and in consequence more care and skill is demanded from the architect if he would avoid all jarring between his work and its *milieu*.

This is not always too easy a problem when building on the ordinary extra-mural site, with only the normal variation of effect due to the seasons of the year; but when we reach the shoreline and come face to face with the ever-changing sea an added difficulty arises. To begin with, the actual shore itself is more insistent in its characteristics than the average inland scene.

C

In one place the long sweeping cliff, a façade in itself showing as flatly as a Bloomsbury house front; in another rugged rocks jutting between deeply-recessed coves, irregular outlines, both vertically and horizontally seeming to provoke the sea against its will to every imaginable kind of antic. Yet again we may wander down to soft levels, creeping gently and unobtrusively out into the shallows with little to mark the shore except the broad belt of yellow sand and the low lines of buildings and trees behind it.

Then we come on to sheltered tidal inlets among rolling hills or with billowy masses of oaks and elms echoing the forms of the cumulus cloud above; here the sea takes a lesser place and influences the scene but little more than would any wide-spreading level or marshland. Far otherwise is it where alternating bluff and lowland, hill-range and valley, meet the coastline, with sea-carved faces accentuating the forms preordained for them in the ages long ago, when their substance was being moulded by geological forces.

Each of these varied scenes makes a different appeal to the man who is called upon to place his building on the sea coast; the rugged line that seems to fret and chafe the sea into continuous strife with the resisting rocks gives perhaps the clearest indication as to what his work should express; the effect of strength and power to give comfort and shelter against the battling elements is clearly demanded. Anything ephemeral, light, and gay in its effect will fail to satisfy. Simple masses and surfaces over which the wind can sweep without fussing and fidgeting will seem right in such a place, and where the outlines left by nature are so insistent it is unwise to attempt to compete with them in a work of artifice; unless in the case of an opportunity to accentuate and enhance the character of the effect, such as may be seen at St. Michael's Mount across the Channel, or to a lesser degree on our own rock so named.

Our architect will also feel fairly safe where the shore line is low and flat; he will call to mind the charm of many an old coastguard station in such a position, and will think of its long roof and overhanging eaves. In this case he knows too that storm and unrest are not the prevailing notes, and that wide-spreading verandahs and level terraces will best express the life he has to cater for. He will know that the sea, even at its worst, only rolls in with long uniform breakers, and that the utmost that can be expected as a break in the harmony of horizontal lines is a splash or two across them when these breakers meet one of the groynes placed to collect further areas of shingle and sand. On these shores he may safely indulge his taste for classic repetition and formality; there is nought to compete with or to challenge carefully studied skylines of a suave and reposeful character; he may, without risk, include a note of gaiety in his conceptions that would be out of place in more rugged surroundings.

The two instances quoted are, however, as in the case of all extremes, those in which the architect's course is most clearly pointed out to him. In that of the more or less uniform cliff, itself the façade of the land to the sea, the problem of a studied architectural treatment is by no means an easy one; probably in any case the cliff will dominate, and it is best so; if a high one the effect of the buildings from the sea is almost negligible, and the architect may concentrate his attention on the pictures formed by the house and its immediate surroundings; the sudden termination of these at the cliff edge will give rise to quite sufficient in the way of difficulties.

We have quoted another typical coastline which presents problems of such complexity that it would be useless to hint at any axioms that would avail as guides. Where the line of denudation cuts through a country formed of rolling hills and valleys the lines and forms so exposed are too subtle in their relationship to make any general rule of architectural treatment of service, and, beyond a statement that buildings of any importance should have a clearly-defined horizontal plateau on which to stand, empirical rules are valueless. Those who have had the opportunity of comparing Genoa with Swansea, towns having marked similarities in their situation, will know more on this point than is capable of being explained in print.

We cannot omit a few words on material. We have always felt that the seaside pleasure town does not, as a rule, demand the same uncompromising effect of permanent solidity, the kind of brick-and-stone honesty that we expect elsewhere. A place that furbishes itself up season by season for a passing public may well take advantage of the ultra-clean and finished effect due to paint and polish, an effect not disdained on shipboard; moreover, the relatively sedate and solid effect that we desire for our permanent homes is less in place with holiday moods.

The object of a holiday being to take us out of our usual selves, anything that conduces to this end is surely to be desired.

We do not wish to claim that all our coast towns are to be treated alike in this respect; indeed, the whole object of our remarks has been to indicate that as our sea coast runs through the whole gamut from stormy romance to placid gaiety, so its architecture may have a range even wider than that allowed under the conditions of every-day life.

THE BUILDING TRADE AND CHANGES IN RATES OF WAGES.

THE Board of Trade has recently issued the seventeenth annual Report on changes in rates of wages and hours of labour, and as the statistics are often used to support arguments to which they do not apply it is well to bear in mind the point drawn attention to in the Introduction that the figures do not relate to changes in earnings, but show the fluctuations in the remuneration of labour as measured by the reported changes in the recognised rates of wages for the same kind of work performed under the same conditions. The statistics thus obtained do, however, afford some indication of the prosperity, or the reverse, of the various trades, as the changes in the rates of wages with which they deal are connected with the demand for labour.

Before turning to those figures which relate to the building trade, with which we are the more immediately concerned, we may refer to the general table, which shows that the fall in rates of wages experienced in 1908 (to which we referred in the *Builder*, October 23, 1909) was continued in 1909, the net result being a weekly decrease of 68,900*l.*, as compared with 59,200*l.* in 1908; calculated from the date each change took place to the end of the year under review (1909), 1,131,500 workpeople sustained decreases, the aggregate decrease being 2,757,400*l.*, as compared with 873,800*l.* in 1908; 8,550 of these workpeople were employed in the building trade. In this trade 3,540 persons received increases amounting to 43*l.* per week and 8,550 decreases amounting to 756*l.* a week, the net result being a decrease of 713*l.* a week, as compared with a net increase of 226*l.* per week in 1908.

The Report states:—"Employment in the building trades continued bad during 1909, and, judged by the mean percentage of trade union members unemployed in those trades for which statistics are available (carpenters and plumbers), it was about the same as in 1908, but considerably worse than in previous years." The mean percentage of unemployed was 11·7, the mean for the ten years 1900-9 being 6·9.

It is always satisfactory to find that this most depressed industry shows an example to other industries in resorting to conciliatory measures. Twelve thousand and ninety workpeople were affected by changes in rates of wages, but only in the case of 635 was striking resorted to before the changes were arranged.

The Report, at page 15, contains some preliminary figures for 1910, and it is satisfactory to note that in the first six months the general tendency of the changes of rates of wages was in the upward direction, and that the building trades were sharing in the movement, the changes showing a net increase of 148*l.* per week.

As regards hours of labour in 1909 in the building trades, the weekly hours of 18,095 workpeople were changed, 17,695 persons having their hours reduced by 29,669 hours per week, whilst 400 had their hours increased by 808. The net result was a reduction of 28,861 hours per week, as compared with 8,290 hours per week in 1908.

NOTES.

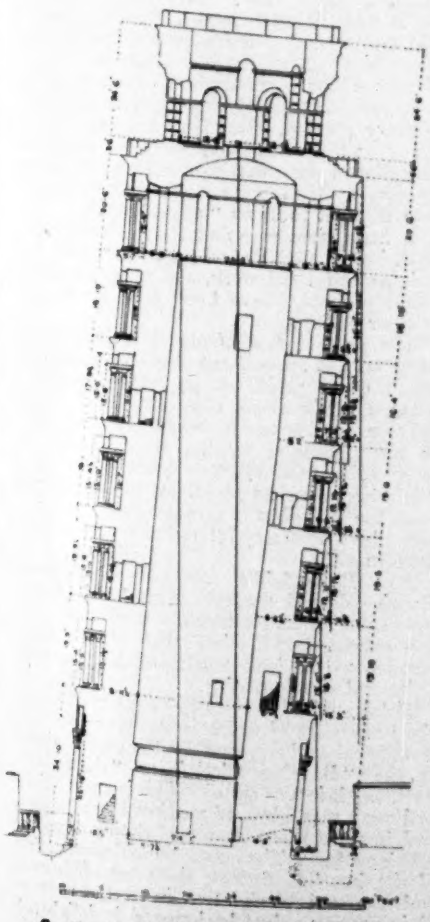
Progress of the L.C.C. Hall.

OUR sketch of the site of the London County Council Hall at the eastern end of Westminster Bridge gives a general view from Westminster Bridge of the condition of the work. As will be seen, the embankment wall is almost finished, whilst much of the remainder of the site has still to be excavated, though a considerable area of the concrete raft on which the structure is to be built is in position. Over the Roman boat which was discovered and is not yet entirely excavated a shed has been built, and the boat is not to be seen. It was apparently an ordinary everyday boat, of oak, and

differing little in method of building, though considerably in line from the ordinary wooden boats of to-day. It seems to have been about 50 ft. long. The width is more difficult to determine, because the sides have been gradually and evenly pressed outwards by the mud of the river bed, so as to make it unnaturally shallow and broad. In the bottom of the boat several Roman relics —bits of pottery and glass, gaming buttons, and soles of boots—have already been found. Also three coins, viz., of Tetricus in Gau (268-273), of Carausius in Britain (286-293), and of Allectus in Britain (293-296). The boat itself is of the beginning of the IVth century A.D. It is proposed to store the boat for the time being near the Horniman Museum, and later on a site near the new County Hall. It will serve as an excellent nucleus for a London County Council Museum, which in time might not be one of the least interesting and important of the museums of the metropolis.

The Leaning Tower of Pisa.

FEARS have recently been expressed as to the condition of the Leaning Tower at Pisa, but we are glad to be able to report that the Commission of experts appointed by the Italian Government to inquire into the stability of the famous tower has issued a reassuring report. The Commission is of opinion that it is practicable to strengthen the foundations in such a way as will prevent any increase in the angle of inclination. The chief danger lies in the presence of land springs at the depth of the bottom of the foundation, but by underpinning to a lower level this difficulty may be overcome. If it were thought desirable, it is not beyond the scope of modern engineering to bring the tower back to a position more approaching the vertical, but such a proceeding would be costly, and, as the centre of gravity falls well within the area of the base, seems hardly demanded by the existing state of affairs. However, MM. Morglia & Weiss, who are at present engaged in shifting the church tower at Bocholt, in Belgium, have suggested that they should apply a method of similar character to the tower at Pisa. The accompanying drawing shows the section of the Leaning Tower as measured and drawn by Messrs. Taylor & Cresy in 1817, and published in their book in 1829. The question that has arisen is whether the tower is stable, as it is now 13 ft. 7 in. out of the perpendicular, whereas Taylor & Cresy give it as 12 ft. 7 in., which, if the measurements they made were correct, shows that it has come over about 1 ft. since 1817.



Section of Leaning Tower of Pisa.

The Telegraph Monument at Berlin.

THE competition for the monument commemorating the foundation of the International Telegraphic Union is now being adjudicated. The first meeting of the international jury was held last week, and it is anticipated that the final decision will be arrived at by the end of the month. The monument is to be an isolated one in the centre of an open space at the meeting point of several important roads, but we understand that there has been little response in this country to the invitation to compete. This is, we believe, mainly due to two reasons. Firstly, that the monument stands in front of a building entirely at variance with our taste in architecture, and, secondly, that its mass and position demand the collaboration of an architect and a sculptor, and few of the English architects qualified for such work feel in sympathy with the ideals of Sir George Frampton, the English member of the jury.

Architectural Copyright.

MR. JOHN W. SIMPSON, whose efforts to secure that architects in England should be in the same position as those on the Continent in regard to copyright for their designs are well known in the profession, replies in the columns of our contemporary *Country Life* to the criticisms of those hostile to the principle involved. Mr. Simpson claims that—

"The doubts that have been expressed by a few architects as to the desirability of legal protection for architectural works arise almost wholly from misconception; arising, I think, partly from the use of the word 'copyright,' which, in England, has come to connote the use made of an author's property in his work rather than the property itself, and partly from the idea that such protection is a novel experiment which may prove impracticable in working. I have not yet had the opportunity of perusing Mr. Buxton's Bill with sufficient care to justify my criticising it in detail. It is evidently far from satisfactory as it stands, and will require very careful consideration by the Royal Institute; but, with your permission, I should like to state very shortly what we architects are asking for. For the purpose of the author's protection the practice of the art of sculpture will be found almost exactly analogous to that of architecture, and we ask that the latter should enjoy equal and similar privileges and be placed on the same footing as its two sister arts. This, of course, involves no restriction to the artist in dealing with the material of the past, the 'domaine public,' as it is generally called, from which we all seek the inspiration which comes of knowledge and tradition, and into which are gathered all works as their period of protection expires. Nor does it prevent the studying, or even the copying, of living masters, provided that in the latter case they do not themselves object; but we maintain that if an architect's work be reproduced, its author should have the right to profit thereby and not some other person who did not design it. As to the actual working of the proposals, it is forgotten, even by those in whom we should expect better memory, that they have long since been in force in other countries—in France under the Revolutionary law of 1793, defined and amended in 1902—and that there exists a clear jurisprudence of decided cases. The question of 'artistic character' is extremely simple, and must not be confused with that of 'artistic merit,' which, as you point out, would involve judgment by the courts on æsthetic points."

ARCHITECTURAL EDUCATION AT HOME AND ABROAD.

BY ALFRED W. S. CROSS, M.A.

Part XI.

FOUNDED by the late Emile Trélat in 1865, L'Ecole Spéciale d'Architecture, in Paris, aims at providing the architectural student with a practical, methodical, and complete course of professional training.

The instruction offered is of a very definite and precise nature, and the carefully-arranged and well-thought-out curriculum of study is sufficiently comprehensive to include all subjects vital to the professional welfare of the architect of to-day.

During the period (three years) at which he remains at the school the student's time is apportioned between one of the school ateliers, the drawing school, and the lecture rooms.

In the former he receives individual attention, guidance, and tuition from its master, and there turns to account, in the course of his private studies, the instruction he has obtained in common with other students of the school from the general drawing school and lecture rooms.

All the courses of study are obligatory, and every student is required to attend the drawing school, to study from the cast or living model, for two hours three times in each week.

During the session the progress of the student is carefully tested by examination in each subject of study upon which he may be engaged, in addition to which he has to present himself for the general examination held at the end of each scholastic year.

The terminal work of the school, which occupies nine months, is supplemented by vacation study, as all pupils of the Ecole Spéciale d'Architecture are expected to produce original work on some architectural subject in the three months of the year during which the school is closed.

This vacation task usually takes the form of drawings, sketches, conjectural restorations of ancient buildings, or essays, and the marks allotted to the work thus prepared are added to those previously gained by the pupils in term time.

Students of each year form a class of themselves, and a student in his first year (third class) is not allowed to proceed to the class immediately above him until he has satisfactorily passed the various examinations and competition tests of his year and fulfilled the requirements of vacation work.

Competitions for the diploma of the school, Diplôme de l'Ecole Spéciale d'Architecture, and for the special certificates awarded by the school, viz., Certificat d'Architecte—Plasticien, Certificat d'Architecte—Salubriste, Certificat d'Architecte—Technicien, take place at the end of the third year, during which designs for a given subject are prepared by the students and worked out under conditions and instructions supplied by the director of the Ecole Spéciale.

Admission to the school is only obtained by passing the Entrance Examination (or

one equivalent to it emanating from a well-known seat of learning). A special class of instruction, embracing a course of tuition of nine months' duration, has been established by the school itself, to prepare students who are desirous of passing its Entrance Examination. This preparatory course of tuition comprises :—

1. Architectural Drawing and the Elements of Architectural Composition (daily exercises).

2. Drawing from the Cast, Ornament and Figure (six hours a week).

3. Courses of lectures on the following subjects: Physics, Chemistry, Mathematics, Descriptive Geometry, the History of Civilisation, Geography, and Literary Composition.

During this three years' training at the Ecole Spéciale d'Architecture the student is required to attend the following courses of lectures, the figures in brackets denoting the number of lessons given in each subject, viz. :—

Descriptive Geometry (40), Elements of Perspective (7), Shadows (12), Construction (35), Advanced Perspective (12), Stereotomy (20), Geology (15), Topography (12), Mathematics (20), Stability of Construction (25), Applied Physics (20), Applied Chemistry (25), Applied Mechanics (16), Building Contracts, Specifications, Estimating, etc. (20), use of Metal work as applied to Construction (20), Electricity (10), Hygiene and Salubrity (20), Building Law (20), Political Economy (14), History of Architecture—Ancient (10), Mediæval (10), Modern, XVIth to XIXth centuries (14), Theory of Architecture (20).

As to the division of the student's time, more attention is paid to lectures during the first and second year than to the ateliers, the latter assuming the greater importance during the end of the student's academic course.

The studies prepared in the ateliers by the more advanced pupils are of an eminently practical nature, including, as they do, designs for buildings of an essentially modern and often utilitarian character, which are carefully worked out under stringent conditions as to accommodation, arrangement, and construction, drawn up by the director of the school. When completed the designs are exhibited and criticised by a jury of the professors, and the prizes awarded in accordance with their report.

Established, primarily, to supply a complete course of instruction designed to meet the technical requirements of the architect, a desideratum at which other institutions, such as the Ecole des Beaux Arts, did not aim, the Ecole Spéciale is distinguished by its express object of providing students with a practical training in all subjects essential to the equipment of the modern architect.

Less artistic—but certainly not less useful in its aims—than its rival, the Ecole des Beaux Arts, the Ecole Spéciale d'Architecture has enjoyed a long and prosperous career, and its far-reaching influence has been of immense service to the advancement of modern art, modern science, and modern thought.

It would be difficult to say to what extent the success of the school is due to the unflagging energy and self-sacrificing years of labour freely given to the attainment of his object by its enthusiastic founder, whose ability in bringing together a band of especially well-qualified teachers to carry out his ideals was probably unrivalled, or how much is due to the inherent excellence of the educational scheme devised by M. Trélat, and subsequently developed and administered by him in so satisfactory a manner as to ensure the prosperity of the institution with which he was so intimately connected.

The necessary funds for the establishment of the Ecole Spéciale were provided through the medium of a limited liability company (known as the Société de l'Ecole Centrale d'Architecture), which was floated with a capital of about 20,000*l.*, raised among subscribers of all classes, including imperial princes, ministers of State, deputies, architects, engineers, and contractors.

Five years after its foundation an annual subvention was granted by the State in recognition of the public utility of the Ecole Spéciale, and I believe that the school now benefits annually, to the extent of about 800*l.*, by the financial support of the French Government.

The supreme administration of the scholastic work is vested in a director and Council by whom the studies of the students are regularly directed and controlled, in accordance with the special object for which the school was founded. For example, this governing body decides all questions relative to the subjects of study or to the order in which they are to be taken by the student. In addition it exercises its disciplinary authority in compelling the regularity of the student's attendance in the lecture room or drawing school, whilst encouraging to the full his intellectual liberty in individual work at the atelier.

The teaching staff of the Ecole Spéciale comprises three *chefs d'atelier*, two professors of drawing, and twenty-three lecturers and instructors.

The tuition fees amount to about 36*l.* per annum.

A comparison of the attainments expected from candidates presenting themselves for the entrance examination of the Ecole Spéciale with the scholastic test required from students desirous of entering the architectural profession in England is interesting. In Part IX. of this series of articles the requirements of the Preliminary Examination of the Royal Institute of British Architects were given at length, and here is the syllabus of the subjects comprised in the Entrance Examination for admission to the Ecole Spéciale d'Architecture, viz. :—

Physics (including Acoustics, Heat, Optics, Magnetism, and Electricity), Chemistry, Arithmetic, Logarithms, Algebra, Geometry (Plane, Solid, and Descriptive), Trigonometry, and the History of Civilisation.

In addition to the above subjects of examination the candidates for admission to the school must produce a drawing of ornament from the round, a plan, elevation, and section of a building from a figured sketch, and an essay of considerable literary merit.

Thus there is no doubt that a far higher standard of general education is demanded in France from the aspirant to the architectural profession than in our own country.

For instance, the requirements in mathematics of the French school are largely in excess of those deemed sufficient for the Preliminary Examination of the Royal Institute of British Architects, and in lieu of Subject 7 of the latter examination, viz., Elementary Mechanics and Physics, candidates for admission to the Ecole Spéciale are required to possess a wide knowledge of general Physics, including such diverse subjects as Acoustics, Heat, Optics, Magnetism, and Electricity. Then, again, in place of the ridiculously easy examination test set by the Royal Institute of British Architects in (2) Writing from Dictation and (4) Geography and History, the French School exacts from its candidates for admission an exhaustive course of reading on the history and development of civilisation. And this subject is the one *par excellence* best suited to form a solid foundation upon which to raise, subsequently, the superstructure of general artistic and scientific knowledge that the architect of the future will be expected to possess. For in the course of his researches upon this wide and comprehensive field of study the student must necessarily obtain a good general knowledge of political, constitutional, and social history, physical geography, and at least some insight into the political movements and events affecting the rise, progress, and developments of science, art, and letters.

The importance rightly attached to a sound knowledge of the History of Civilisation may be gauged by the exhaustive nature of the syllabus of the lectures on the subject which are attended by students preparing for the entrance examination for admission to the school, the lecturer's review of the world's history being as follows, viz. :—

The Races of Mankind, Ancient Civilisation, the Greeks and Romans, the Middle Ages, Modern and Contemporary History, and the Arts, Sciences, and Letters.

Chemistry is another subject which, naturally enough, finds a place in the preliminary examination of the young French architect, but no test of the candidate's knowledge of foreign languages, either ancient or modern, is included in the syllabus of the obligatory subjects to be taken by the student prior to entering this excellent school of architecture.

ARCHÆOLOGICAL SOCIETIES.

Suffolk Institute of Archæology.

The first of the summer excursions of the Suffolk Institute of Archæology this year took the form of a two days' visit to Sudbury and Clare. At St. Peter's Church, Sudbury, the Rector, the Rev. J. J. Jones, gave a brief history of the building, supplemented by additional notes and criticisms of the architecture by Mr. Basil Oliver, who acted as guide, and from whose pen we have this report. Though portions appear to be earlier in date, the existing building is for the most part late XVth-century work, the nave roof, however, being considerably later.

There are some irregularities in the plan, the most noticeable being the distinct orientation of the chancel, due to its having been built at an angle with the nave.

The magnificent carving of the screens to the chancel is the feature of this church. These screens are splendid examples in excellent preservation. Only the lower panels of the rood-screen remain, with painted figures of saints, unfortunately repainted by Gainsborough Duport, a relative of the distinguished painter, who was a native of Sudbury.

The originals had probably all the charm which is now so conspicuously absent, and were very likely the work of one or more of the Flemish artists, who are said to have painted many East Anglican rood-screens. It is most regrettable that there is not more old tracery left in the windows, though at the west end of the south aisle one or two windows still retain original stonework as well as some particularly pleasing plain XVIIIth-century glazing. For the most part the old glass and stonework have been ruthlessly demolished in order to make way quite unnecessarily for lifeless mechanical stuff which was thought to be an "exact copy."

A little more care and thought would have easily prevented the wholesale destruction of this beautiful old work, and adequate repairs could probably have been done for a much smaller outlay.

The great charm of old glass is unfortunately seldom appreciated as it should be, even when quite plain. It is invariably crown glass, and the slight convexity of the panes gives a sparkle to the whole window, which is sadly lacking in the commonplace and thoroughly unsatisfactory tinted glass which has now taken its place. It is a great pity that the old glass was not merely releaded, and where necessary interspersed with suitable modern glass.

Mr. Butterfield's mid-Victorian pseudo-Gothic-coloured decoration of the chancel is overpowering and altogether unpleasant, and one cannot help feeling that Mr. Bodley's reredos would look much better in a more quiet and simple setting.

There is nothing remarkable about the font, the lower part of which is modern; but what is unusual and not seen by the casual visitor is the "Burying Cloth," or "Alderman's Pall," as it is now called. This is an exquisite and very rare piece of mediæval needlework, and has every appearance of dating from the XVth century. The execution and whole effect of the kneeling figures, the vases of flowers, and the old black-letter inscriptions on a plain maroon velvet background is delightful.

Equally interesting is the fine old XVIIth-

century pulpit cloth, with a beautifully embroidered coat of arms worked on it, in every way quite characteristic of the needlework of the period. Until early in the XIXth century, as shown in old prints, the west end of this church had houses built up close to it in quite the continental manner, but now the building stands on an island site on high ground, with its west front looking down the hill.

The party next visited St. Gregory's Church, which occupies a fine site on the Croft, and is less enclosed than St. Peter's. This building is of various dates, but chiefly XVth century.

It is known that Simon of Sudbury rebuilt the north aisle between 1365 and 1370. Additional proof of the correctness of these dates is furnished by the form and mouldings of the north doorway (externally) and the north arcade, which are characteristic XIVth-century work. The south arcade to the nave was probably in accord with the prevailing fashion, and has just that amount of individual character for us to see that it is later work, and, without being a blind copy, is in complete harmony with the earlier north arcade. The south porch has a chapel adjoining it on the east side. The south door is a good one, and like many in the district.

The clearstory to the nave is also a XVth or early XVIth century addition, the line of the steep-pitched older roof on the east wall of the tower being clearly defined and visible from the interior of the church.

The old roofs remain, except to the chancel, but this contains the original seating and stalls, which, with their carved misereres, are exceptionally fine.

The vestry is very late, and is a good piece of Tudor brickwork of about the same date as the north porches to Little Waldingfield, Stoke-by-Nayland, and other local churches.

The painted wood font-cover of the time of Henry VI. is an exquisite piece of craftsmanship, and one of the few remaining examples in East Anglia. There was a similar cover in the Abbey of St. Edmundsbury—as it was then called—and there are, or were, others at Ufford and Worlingworth in Suffolk and at Luton in Bedfordshire. An old writer in 1827 described the pulpit as an "octagon of wainscot with a large sound board." This, alas, has entirely disappeared, and Mr. Peter Constable of Sudbury can recollect seeing it publicly sold by auction on the Market Hill! This irretrievable folly is especially exasperating when we look at the abominable stone pulpit, on a brick plinth, which has taken its place. It has been partly coloured in red and green, and is as ugly as it is vulgar.

The coloured decoration of the chancel and chancel arch is also quite a triumph in bad taste, but it could easily be remedied by a cream-wash over the whole. This would give the colours in the east window—though not old—their proper value, to say nothing of enhancing the lovely varying colour of the old oak choir-stalls. The chancel paving is also commonplace.

A visit was paid to All Saints' Church. The Vicar, the Rev. C. J. Stower, received the visitors, and, assisted by Mr. Basil Oliver, drew their attention to the many features of interest, as well as giving particulars of the history of the building.

All Hallows, or All Saints', has always been a district parish church, and, similarly to the other Sudbury churches, it is not unlikely that part of the earlier building may be incorporated at the east end with the existing church, which is chiefly XVth-century work.

During the Dutch War, in the reign of Charles II., the church was converted into a prison, according to the Lambeth Records. There appear to have been both north and south porches, but both have now disappeared entirely, so also the old seating, which was removed in the middle of the last century to make way for modern poppy-headed benches. The tower, like that of St. Gregory's, is of excellent design and good proportion, and has a fine west door. The roofs are original, that to the nave bearing faint traces of mediæval painting. The XVth-century screens are particularly beautiful, and almost as good as those in St Peter's.

The pulpit of the time of Henry VII. is well designed, and has a good outline. Its good preservation is probably due to the fact that is was hidden by painted deal boards up to 1850. The restored portions are not difficult to detect. The disused priest's room over the vestry is a somewhat unusual feature.

The pleasantly-coloured late XVIth or XVIIth century genealogical tree of the Eden family—of Ballingden Hall in this parish—painted on the wall at the east of the north aisle is decorative and of some heraldic interest.

The hand of the "restorer" is far less evident in this church, and, consequently, throughout it has a much more pleasing appearance than the other Sudbury churches. The south aisle windows have, rather unfortunately, modern glass, and are a great contrast to the fine range of old windows on the north side.

Many members of the party afterwards visited the best of the old timber-built houses in the town.

On the second day of the excursion the Church of St. Peter and St. Paul at Clare was visited first. It is supposed to have been erected by Richard de Clare, Earl of Clare, Hereford, and Gloucester, about the middle of the XIIIth century. The fine west doorway, with its dog-tooth ornament and other characteristic details, is apparently of this period, though possibly restored, and it is safe to assume that the tower is a portion of the original structure.

The north and south porches are a century later, the latter, with its massive stone groining, being the more interesting of the two. The nave and aisles were rebuilt in the XVth century on an extended plan and encroach on the porches.

The aisles have also been extended eastwards, and open to the chancel by two arches. The south porch has a chapel attached to it on its east side, known as the Priory Chapel. There is a stair-turret on each side of the chancel arch, terminating in a spire.

The font of the XVth century is octagonal, with good panelling on seven of its sides, the west side being quite plain. Unfortunately when the nave was reseated in 1883 the old pulpit, with sounding-board and hour glass, was removed and replaced by a modern one. At the same time a fine old Jacobean pew, with a staircase, in the Priory Chapel was also taken away, the remains of which are still to be seen in an outbuilding of Clare Priory.

The old oak doors are very good specimens, and there is other ancient woodwork. Queen Elizabeth is said to have presented the brass eagle lectern, and a fine silver goblet, taken from a Spanish galleon, now used as a chalice, was given to the church late in the XVIIIth century. Recent repairs have been skilfully done by Mr. Detmar Blow in accordance with the admirable principles of the Society for the Protection of Ancient Buildings. He and the Vicar, the Rev. J. R. M. Vatcher, are to be highly complimented on the care and trouble they have taken of this fine old church.

Mention should be made of the delightful east window, with its exceptionally beautiful old heraldic glass. It is a sheer delight, and it has lost nothing by a highly successful releading, done, as it should be, on the spot. Mr. Blow, too, knows the artistic value of whitewash, or rather cream-wash.

Several of the old houses in Clare were visited after the luncheon interval, including the well-known and highly-ornamented plaster-fronted house adjoining the churchyard, illustrated both in Mr. Belcher's "Essentials in Architecture" and in "The Art of the Plasterer," by Mr. Bankart.

Though the house is XVth century, the plasterwork is undoubtedly of the XVIIth century.

THE CASTLE ASSEMBLY ROOMS, RICHMOND.—This freehold property will be offered for sale at auction in the current month. It stands in Hill-street, opposite the Town Hall, which occupies the site of the old Castle hotel, pulled down twenty years ago. The buildings were erected, for Mr. F. C. Mousflet, in 1889-90, after designs by Mr. Frank Brewer. The theatre has seats for an audience of 800 persons, and forms one wing of the block, the other wing contains the ballroom; between the wings are the vestibule, gymnasium, dining-rooms, kitchens, and offices. There is a strong local feeling that this property should be purchased by the town, but the opponents of this proposal claim that it would be preferable to build a first-class concert-hall on land now in the hands of the Corporation, near the present municipal offices.

BOOKS.

The Georgian Society Records of XVIIIth-Century Domestic Architecture and Decoration in Dublin. Vol. II. (Printed for the Society at the Dublin University Press. 1910.)

A FRENCH tourist of 1734, on visiting some of the numerous book-shops which Dublin then contained in order to gain some idea of the measure of culture in which the citizens lived, writes:—"I found there is no city in Europe where there are so many good pieces printed and so few bad. They do not know this; but it is because they do not know what is done elsewhere. Printing and books are cheaper here than in London. . . ." And later, on this ground, sufficient in itself, and on other, he remarks:—"After the four capitals of Europe—Paris, London, Rome, and Amsterdam—Dublin, I think, may take place." And he goes on to enumerate some of the external aspects of the city, notably the views up and down the river in daytime and at night and the panorama from what we gather to have been that part of Phœnix Park, not yet opened to the public, which overlooks the town, which prospects, he says, are not equalled by anything he knows. Even now in certain of the older parts of Dublin one may glean hints of the classic breadth of a more spacious day; columns and cornices, bridges and squares, are enveloped—this is essential—in a cloak of the consciousness of a prouder past, not yet forgotten and not beyond recall.

Now the French writer's words are not to be wondered at, neither need his good faith be held in doubt. For from the beginning and until the year 1801, when the united Standard first flew above the Castle, geographically in the first place and, of course, fundamentally and politically in later times, the circumstances contributing to the development of Dublin have always been such as go to make a City as distinct from a town, a place admittedly the apex of its civilisation. From the outset, in the embryonic palisade on the spot where the Castle now stands, some measure of refinement on usual living must have been necessary on the part of Ostmen who inhabited it, if only on account of their more closely herded condition—this and nothing more. For Dublin does not appear to be founded on any spiritual rock. It grew as most cities have grown, as grow trees or anything else, on the spot most favourable to it. As grew London, Paris, Rome, Athens herself; architects especially must never be afraid of admitting the physical basis. The taking of it by Strongbow and the importation by the King, after his short stay there, of some citizens of Bristol seems to advance us unto the realm of circumstance. But only superficially. Dublin by virtue of being where it was had already become worth the taking, and its strategic position for the subjugation of the hinterland is a commonplace of the history books. The grant by the King to the men of Bristol of an extension of all the privileges they had enjoyed as citizens in their old city to render more alluring their prospects in the new was certainly a happy circumstance, as fruitful in the production of the very lusty tradition of Dublin citizenship as it was politic in establishing the core of the English pale. But English pale it remained right through until the Boyne, and virtually, indeed, for some time after, with its border seldom further removed than the length of a good day's march from Dublin. And the city itself, with its initial tradition of citizenship, kept healthy by the continual round of attack, defence, repulse, and consequent punitive sally, and maintained in the spirit of freedom by the continual acts and attempts at repression and extortion on the part of those responsible for its welfare, came through the centuries as a City State in effect, and the only one in these islands.

We have before us the work which gives occasion for the foregoing observations, a volume of the report and historical account, that the Georgian Society of Dublin is producing, of the Georgian work which is the overwhelming note even of modern Dublin.

This, the second volume of a series which the Society proposes to issue annually (to members of the Society only), deals mainly with the old mansions in Henrietta-street, St. Stephen's-green, Hume-street, and Ely-

place. Besides giving illustrations of the more interesting and important houses, it contains an historical account of these streets and, so far as could be ascertained, the date at which the houses were built. As full a list as possible is given of the various occupiers of the houses at different periods, particularly during the time when Dublin was the centre of a brilliant society and the houses were the abodes of a wealthy aristocracy and of rich merchants. "Such a record, it is hoped, may be not only of interest in itself, but of value as a contribution to the history of the city and a record of its architectural and decorative splendours." We quote from the preface, and we may say at once that we find the hope expressed, as far as we are concerned, amply fulfilled, and that we commend without hesitation or reserve the care and completeness with which the work is done. Dr. MacDowel Cosgrave and Mr. W. G. Strickland, the actual producers of the Report, are to be congratulated and urged to further zealous perseverance in so valuable a pursuit. The first volume, issued in 1909, gave a series of illustrations of Dublin houses built in the early years of the XVIIIth century, followed by examples of the domestic architecture and decoration of the middle and latter part of the century. In the present volume a few of the larger houses erected during the early period are illustrated and described, and from one of these one of our illustrations is taken. No. 36, Bride-street was built probably at about 1730. The staircase (see plate), as well as two of the ceilings, is undoubtedly of a date not much later than this, although the evidence of the façade would lead one to suppose that it was some years later. Some wainscot and plaster work in this house is unique in Dublin, and, although there seems to be no documentary evidence of it, one can only suppose that parts of the house were later remodelled.

No. 10, Henrietta-street was of the same date—certainly not later than—1730. It was built by Luke Gardiner, who acquired the estate in 1721, for his own use, and was probably designed by Richard Cassel. Some famous people have lived in it, including Lord Mountjoy, who was Colonel of the Dublin Militia and killed in 1898, and the Earl of Blessington, a noted rake of the Regency. In our view of a corner of one room what they were so fond of calling the "Parisian" luxury of the interior is adequately shown. No. 9, also in Henrietta-street, from which the photograph of a ceiling is taken, is an especially interesting and complete example. The façade, which is large and plain, gives scarcely a hint of the magnificence of the interior. The entrance-hall and staircase and the panelled rooms are very fine, although in places the parts are somewhat crudely proportioned. It is thought to be the work of Richard Cassel, and was erected by Thomas Carter, Master of the Rolls, in 1731. Our illustration of the opening from the staircase

Dublin: No. 8, Ely-place. The Staircase.

landing shows equally the scholarly quality of the detail and the fine disregard of symmetry and the principles of "axial planning" characteristic of its place and period.

No. 86, St. Stephen's-green is a house which in an old book of "Views of Dublin" is referred to as "the structure which claims principal attention" among the edifices on the Green. It was built in 1765, and, in the words of an advertisement for its sale nearly a hundred years afterwards, it "presents a magnificent granite front, with a massive portico surmounted by a finely-sculptured lion. The interior of this princely abode," etc. The attention of the visitor "must be arrested by the grandeur of the wide Portland stone staircase and the sumptuous decorations in stucco ornamenting the splendid arched ceiling" (see our illustration), "which is in itself an object of great beauty, and has been pronounced by the *élite* of the country as a masterpiece of art." The lion referred to is by J. Van Nost, a pre-eminent sculptor of that time. The advertisement, speaking of the rooms, says they are "decorated in the finest style and enriched in stucco, and are of such beautiful proportions as to vie pre-eminently with any other residence in the city," and does not overstate the case. The ceilings and walls are lavishly decorated with plaster-work of excellent quality and individual feeling in the rococo manner. The doorways are very boldly and beautifully carved; and the mantelpieces, in marble, inlaid in a manner that would certainly be called Bossi work were it not done at a time long before Bossi's period, are particularly interesting. The house is now part of University College, so that there is some likelihood of its being preserved in its present state of perfection.

In No. 8, Ely-place, of which we reproduce a view of the staircase, built in 1770-1, we find a mingling of the style prevalent in the houses erected before that date with that then beginning to supersede it. The stucco ceilings and carved doorways, with pendant swags in the drawing-rooms, contrast with the later manner—a sort of rather heavy and striking Adams style—on the dining-room walls. The staircase, in the inner one of the two halls, is quite different from any other in Dublin, and is in three flights, lit by a large Venetian window. The steps are of stone, and the balustrade is decorated with figures of animals emblematic of the Labours of Hercules. At the bottom of the staircase, forming a termination to the balustrade, stands a life-size figure of Hercules himself in Portland stone. The Labours are represented in a series of five panels in the following order:—The Erymanthian Boar, the Nemean Lion, the Cretan Bull, the Arcadian Stag, and Cerberus. These figures are of wood, gilt. Between them are finely-designed panels, each with three small medallions of lead, beneath the carved mahogany handrail; the balusters are of wrought-iron, with ornaments in lead. At the turn of the balustrade on each landing are carved figures of eagles with outstretched wings. Messrs. Cosgrave and Dickinson are of opinion that "this very remarkable staircase was probably designed and made abroad. It closely resembles the staircase in the Musée Moderne at Brussels." "The Brussels staircase, which was restored early in the last century by the architect Balat, is adorned with the twelve Labours of Hercules, the figures in bronze. The balustrade is otherwise of the same design, or nearly so, as that in Ely-place, and is likewise terminated by a statue of Hercules."

A Practical Guide to the Town Planning Act and Regulations. (London: Chas. Knight & Co., Ltd., Tooley-street, S.E. Price 2s. net.)

THIS work, which has been specially prepared by Mr. John A. Angell, Assoc.M.Inst.C.E., is a small handbook, the contents of which were originally prepared as a report to the Beckenham Urban District Council, to which the author is Surveyor. It consists of an analysis and digest of the Act, with comments as to the application of the various powers and duties thereunder, and a statement of the technical procedure from the initial to the final stages of the scheme. It also includes a synopsis of Part II. of the Act (dealing with town planning) and its schedules, and also of the regulations of the Local Government Board.

Considering the difficulty experienced by the non-legal mind in grasping the purport and essentials of such a complicated Act as this, we should think that councillors and others who have to deal with it will find such a handbook as this extremely useful.

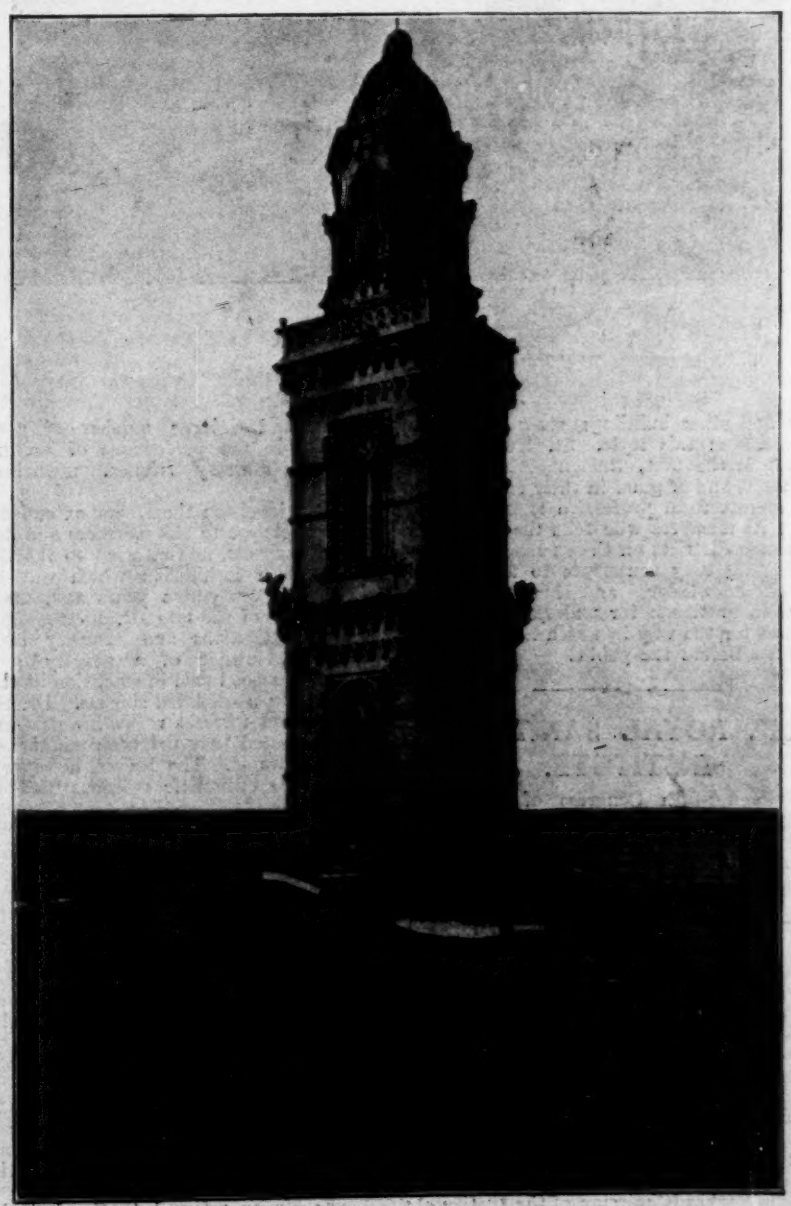
In the Heel of Italy: A Study of an Unknown City. By MARTIN SHAW BRIGGS, A.R.I.B.A. (Andrew Melrose. 8s. 6d.)

MR. BRIGGS has done well to publish his monograph on Lecce, which he is fairly entitled to claim to be an "unknown city." While, as the author shows, this town in Southern Italy is in no way inaccessible, its remoteness from the routes frequented by the tourist and its lack of any feature of exceptional and outstanding interest have resulted in its almost entire neglect by the traveller.

Among the few who have recorded their impressions of Lecce, Mr. Briggs refers to the Hon. Richard Keppel Craven, who visited it in 1821; Mrs. Ross, who refers to it in her "Land of Manfred" (1889); and Mr. Hamilton Jackson, in his "Shores of the Adriatic" (1906). The most complete description hitherto published is in Ferdinand Gregorovius in "Nelle Puglie," while Paul Bourget has depicted its characteristics in the following appreciative lines:—

"This capital of the Terra d' Otranto is a Neapolitan city of the late seventeenth century, standing intact wth all sorts of examples, due in the first instance to architects of Charles the Fifth's days, and then to those of the later disciples of the Renaissance. It forms a fitting counterpart of Siena, and typifies in its rich beauty all that civilisation of gaiety, gallantry, and sensuality, just as the other seems to harbour within its palace walls the severe and heroic civilisation of the Tuscan Middle Ages. Here one dreams of light music, of masquerades, of voluptuous and easy feasts, of a happy and Italianised Spain. . . . Yet this baroque is not simply a marvel of impetuosity and imagination. An indescribable delicacy is mixed with it which betrays its ancient Hellenic origin. In this province, scattered with villages where Greek still is spoken, something of the old spirit seems to have left its mark everywhere. The airs which the children sing still have the long-drawn gravity of the melopeia, very distinct from the gay melodies of Naples. The natives all have a sobriety of gesture which is in contrast to the neighbouring lands of the burning South."

It is not to be wondered at that our author felt impelled to turn his steps towards a city possessing such gracious qualities, and on reaching his goal was held by the varied features of interest it presents. His studies of Lecce and the adjacent villages admirably justify his choice, and while he devotes the larger proportion of his book to an historical *résumé* of the city and district, bringing it from the earliest prehistoric conditions down to the present day, the manner in which this history has expressed itself in the buildings is clearly shown by the numerous sketches by the author and by photographs of characteristic buildings. Judging from these, the earlier work in and around the city, with a few exceptions (see the campanile, Soleto, reproduced herewith), is not of greater interest than can be found in other parts of Italy and Dalmatia; but after Charles V. remodelled and fortified the city a period of building set in, and consequently it is exceptionally rich in examples of Baroque architecture. Half a dozen churches, besides



The Campanile, Soleto.
(In the Heel of Italy.)

S. Irene, Lecce.
(In the Heel of Italy.)

palaces and other buildings, show the merits and defects of this style. St. Irene (which we give) is the best, though several others are brilliant and original in their composition.

The architectural profession is indebted to those of its members who take the trouble to visit remote districts on the chance of finding subjects that may contribute to the general fund of knowledge, and Mr. Briggs is entitled to gratitude for undertaking such a quest and for the way in which he has placed his studies before the public.

THE ROYAL SANITARY INSTITUTE.

THE twenty-fifth Congress of the Royal Sanitary Institute is being held this week at Brighton, and was opened on Monday last under the Presidency of the Hon. Sir John A. Cockburn, K.C.M.G., M.D.

The members and delegates were received by the Mayor of Brighton (Councillor Edward Geere, J.P.), and afterwards entertained at luncheon in the Royal Pavilion. Supporting him were the President of the Congress, Sir John A. Cockburn; Mr. J. Waddington, J.P. (ex-High Sheriff of Sussex); Mr. H. D. Searles-Wood, F.R.I.B.A. (Deputy Chairman of the Council of the Institute); Colonel J. Lane Nolter; Dr. Phillip Boobbyer; Councillor Burberry; Mr. E. White Wallis, F.S.S. (Secretary of the Institute); Dr. Forbes; the Mayoress; the Mayor of Hove (Alderman Captain A. B. S. Fraser, J.P.); Dr. Louis Parkes (Chairman of the Institute); Alderman Sendall, J.P.; Professor Kenwood; Alderman Colbourne, J.P.; the Rev. T. and Mrs. Morgan; Mr. Hugh Talbot (Town Clerk), and a large number of gentlemen eminent in the professions of architecture, hygiene, sanitary science, medicine, and surgery.

At the luncheon the Mayor extended a very hearty welcome to the members and delegates of the Congress, and referred to the Congress and Health Exhibition which was held in Brighton twenty-nine years ago, under the Presidency of the late Dr. Richardson, when health exhibitions and sanitary congresses were "somewhat of a novelty"; but it attracted a good deal of attention at the time, and was an unqualified success. Dr. Richardson made a forecast regarding garden cities, and suggested that Brighton might become a modern Utopia. The Mayor, however, stated that these optimistic opinions had not yet been quite fulfilled. At that Congress Dr. Richardson gave a great deal of valuable advice to the people of Brighton, and although even now Brighton was not quite the Utopia of which he had dreamed, the members of the present Congress would find that its people had taken every care to make the most of the gifts which nature had so bountifully bestowed upon the town; they had called into play everything for the welfare of the town which sanitary science could teach them.

The Brighton Corporation had constantly and consistently kept in mind the natural advantages of the town, and utilised them to the fullest extent. He hoped those present would think Brighton justified in claiming the motto, "Health and pleasure all the year round."

The Mayor referred to the fact that ever since the Sanitary Institute was founded in 1876 it had already made progress as regards membership, and its influence had increased year by year. What was considered merely theory a short time ago was practice to-day. One of the most vital questions with which any nation could be confronted was that of maintaining the physique of its people, and the solution of this, as of so many other problems, would seem to lie in education. From their earliest years the people must be instructed in the simple laws of health; must be taught that personal cleanliness, sunshine, and fresh air were the enemies of disease; and when they were really convinced concerning the truth of these things, much of the task would have been accomplished. Concluding, he said they in Brighton very fully appreciated the zeal with which the Institute had always striven to attain those objects which it had in view, and as a community they were very much indebted to the Institute for the beneficent results of its labours.

Dr. Louis Parkes responded, and said that no better place than Brighton could be found for discussing the question of municipal hygiene.

The formal opening of the Health Exhibition was performed by the Mayor in the presence of a large number of delegates and visitors. After a short speech, in which he pointed out the value of the Exhibition, Dr. Boobbyer read the list of the awards as follows:—

Award of Prizes.

Silver Medal.—The Eagle Range and Gas Stove Company, Ltd., Eagle range; The Brighton and Hove General Gas Company, gas-heated confectioner's oven; British Sanitary Company, self-acting earth-closet; The Candy Filter Company, Ltd., candy filter for ferruginous and moorland waters; Clayton & Co., Ltd., motor ambulance; Arthur H. Cox & Co., Ltd., pharmaceutical preparations; R. Fry & Co., Ltd., aerated water made in Brighton; Goddard, Massey, & Warner, Ltd., steam disinfector, improved type; The Horsfall Destructor Company, Ltd., refuse destructor, with tub feed; The "Interoven" Stove Company, combined sitting-room stove and cooking range; The Metal Jointing Company, Ltd., amalgaline metal jointing; Packham & Son, the K.B. kitchener; J. F. Phillips & Son, 21, Old Queen-street, Westminster, cable system of heating; Sussex Portland Cement Company, Ltd., educational value of cement exhibit; Arthur Skeffington, recumbent-invalid lifter; The Tintometer, Ltd., Lovibond's colour educator.

Bronze Medal.—The Brighton and Hove General Gas Company, gas-heated garage boiler; The Brighton and Hove General Gas Company, "Thermo" fire front; Bristowe & Co., Ltd., Robbins' non-set plastic cement; Bristowe & Co., Ltd., vertical bath; Cakebread, Robey, & Co., magnet lockfast joint; Cakebread, Robey, & Co., Stevens's barrel locks; Carter & Co., Ltd., leadless glaze ware; Edward Cook & Co., Ltd., cofectant, surgical and medical; John Evershed & Son, household and laundry soaps; Executors of the late William Sharratt, compact fumigator; Executors of the late William Sharratt, formalide sprayer; John Gilkes & Sons, Ltd., tekko; John Gilkes & Sons, Ltd., Birge leather papers; Walter Gillett, Moore's method of indexing and filing; The Horsefall Destructor Company, Ltd., low loading tipping van; George Howson & Sons, Ltd., Westwood range of urinals; George Howson & Sons, Ltd., bracket lavatory in white porcelain; George Howson & Sons, Ltd., combination hospital bed-pan sink; George Howson & Sons, Ltd., Westwood bidet; Wm. Harriman & Co., Ltd., Newcastle-upon-Tyne, stoneware trap; G. Jennings, Ltd., Lambeth Palace-road, S.E., hydro-pneumatic siphonic w.c. suite; Library Bureau, Ltd., card system of registration; H. Lowry, Ltd., cobra drain cleanser; McDougall Bros., M.O.H. disinfecting fluid; Moule's Patent Earth Closet Company, Ltd., earth closet, with sucker acton; Newton, Chambers, & Co., Ltd., Izal disinfecting fluid; Thomas Parsons & Sons, sanitary enamels; Ronuk, Ltd., floor-polishing brushes; "Sanitas" Company, Ltd., "Sanitas" bactox; J. J. G. Saunders & Sons, drainer and slop sink; J. J. G. Saunders & Sons, bath and shower; Shelvey & Co., Ltd., 1A, Paston-place, Brighton, mineral waters made in Brighton; Walter William Smith, cantilever sink trap; Walter William Smith, combined copper and bath installation; Southall Bros. & Barclay, Ltd., sanitary towels; Spencer Heath & George, Ltd., 48 and 52, Goswell-road, E.C., educational (athletic) diagrams; Standard Range and Foundry Company, Ltd., improved municipal combination heating and cooking stove; Standard Range and Foundry Company, Ltd., Birkone patent barless fire; The Tintometer, Ltd., apparatus for quantitative determination of colour blindness; John

Tylor & Sons, Ltd., "Manor" pedestal valve closet; John Tylor & Sons, Ltd., "Regal" silent cistern; John Tylor & Sons, Ltd., trough lavatories; Virol, Ltd., Virol.

Deferred for Further Consideration.—Royle's, Ltd., Row's bath-water purification system; The Limmer Asphalte Paving Company, "Lithofalt" "Lithomac"; Edward Cook & Co., Ltd., "Cofectant" powder; Goddard, Massey, & Warner, refuse paving block; London Warming and Ventilating Company, Ltd., anthracite slow combustion stoves; The Ferrybridge Foundry Company, Ltd., warming and ventilating stove.

Building Exhibits.

The exhibition is held in the Dome and Corn Exchange, and, although small in the number of exhibitors, is exceedingly interesting. In a health exhibition there are naturally many stalls showing articles of general rather than professional interest. We shall therefore briefly note only those connected with architectural work in its broadest sense.

Messrs. John Gilkes & Sons, Ltd., show a well-arranged stall of wall-papers, paints, distempers, and varnishes. This firm makes a speciality of papers so nearly resembling leathers and silks that it is almost impossible to detect that they are not the articles they represent, except by the sense of touch. For "Tekko," a wall covering of silk-like effect, it is claimed to be absolutely non-fading and washable.

An interesting stand is that of the Brighton Corporation Electricity Department. The object aimed at is to demonstrate to the ordinary householder the many uses to which electricity may be put other than lighting. Working models are shown of fans, cooking apparatus, a sewing machine, piano, knife cleaner, boot polisher, portable fountain, vacuum cleaner, etc. These can be worked at a cost for electricity varying between one penny and one-tenth of a penny per hour. The model showing an "ozonair" equipment, by which "genuine ozone" can be manufactured by electricity, attracted much attention, as also did a small fountain worked with the supply of one pail of water, continually re-used, at a cost of one penny for ten hours.

"Sanitas" Company, Ltd., show their patent drain tester, and also many of their specialities made from this disinfectant.

The "Interwoven" Stove Company exhibit their combined sitting-room stove, cooking range, hot plate, and boiler. The small compass occupied by this stove renders it a valuable fitting for use in flats, bungalows, cottages, and other positions where it is necessary to economise space. It is commendably simple in action and economical in fuel.

The Horsefall Destructor Company show a model of their mechanically-charged destructor, and also a model of a dust van with their patent balance tip, self-opening tailboard, and combined cover lids and wind guards. The van is easily filled throughout its whole length, and the self-acting balanced tip permits the immediate discharge of the contents by the simple operation of backing the cart against the tipping beam after the retaining pin has been removed. The self-acting tailboard opens automatically when the cart is tipped, thus obviating the loss of time and risk of accident in going behind the cart to unfasten the tailboard.

Messrs. Goddard, Massey, & Warner show models of a refuse destructor, hospital incinerator, and also washing and disinfecting machine and hydro extractor for infectious diseases hospitals.

One of the most artistic exhibits is furnished by Messrs. Thomas Parsons & Sons showing the application of their "Endelline," "Endelflat," and "Lacreite" sanitary enamels; "Mosiaco" metallic paints; varnishes, and stains.

Moules Patent Earth Closet Company, Ltd., show their pull-out, pull-up, self-acting closets and other well-known fittings made by the firm.

Messrs. Bristow & Co., Ltd., show a series of sanitary fittings, "non-set" plastic cement, and a variety of other interesting exhibits. The non-set plastic cement for manholes and inspection-chambers appears to possess many advantages over the now generally used Russian tallow.

Messrs. Phillips & Sons exhibit for the first time their "Perfecta" system of heating and ventilation. It is an arrangement for which is claimed perfect sanitary and health properties. Radiators in the ordinary accepted form are dispensed with, and the walls of the building become the warming medium, together with a current of fresh warm air rendered perfect in humidity by a new form of humidifier. The system is specially adapted for hospitals, asylums, schools, churches, restaurants, and public buildings, but may be used with equal advantage wherever warmth is desired.

Messrs. Newton, Chambers, & Co., Ltd., show their well-known "Izal" disinfectant fluid and various preparations connected with this material.

Messrs. Cakebread, Robey, & Co. show samples of drain-testing and cleansing apparatus, and Messrs. Tylor & Sons, Ltd., a good selection of sanitary fittings.

The Eagle Range Company exhibit their well-known ranges, many of which are fitted with recent patented improvements.

The Candy Filter Company exhibit their apparatus for purifying water. It is claimed that by the De-Clor process water, however polluted by bacilli, can be rendered perfectly pure by the use of chlorine and de-chlorinating before use. The system is automatic in action.

Messrs. J. J. G. Saunders & Co. have an excellent selection of sanitary fittings. The combined bath and lavatory shown by this firm is admirable in economy of space, and the "Florentine bronzed" gun-metal fittings very suitable where an untarnishable surface is desired.

Messrs. George Howson & Sons' exhibit is a striking one as demonstrating the latest development in hospital sanitary fittings. The revolving post-mortem operating table shown by this firm is a model of simplicity and efficiency.

The Brighton and Hove General Gas Company have many exhibits of interest, among which may be noted the gas motor-garage boiler, by which water may be heated, whilst the gas flame is so protected as to obviate explosion owing to petroleum fumes. Another ingenious device is a gas hot-water heater for a bath or lavatory. This acts automatically, and reduces the gas immediately the water reaches the desired temperature. When hot water is drawn off the inflow of cold water at once increases the gas supply until the heat lost by the volume of water in the tank has been regained.

The Limmer Asphalte Paving Company show samples of their "Lithopalt" blocks and "Linomac" paving, which are both widely known.

The Metal Jointing Company have an exhibit showing the application of "Amalgaline" to the jointing of lead to lead or lead to brass pipes. In the demonstration given at the exhibition the results of water pressure, shearing stress, etc., were most satisfactory, but the process so greatly depends upon the absolute register of the specially-prepared spigot and socket, which must be made with special tools, that it will be interesting to see if the process is capable of general application.

Mr. J. F. Holt shows an ingenious device for securing the isolation of a room used in cases of infectious diseases. It is a portable cabinet which can be fixed over the door to any room, and thus form a temporary chamber which can be continually disinfected by any disinfecting agent. The air entering the chamber each time the door of the sick room is opened is taken to the outer air by means of metal tubes, so that none of the air from the sick chamber need enter the remaining portion of the house.

Messrs. George Jennings show their well-known "Closet of the Century" and other sanitary fittings. The "Nature" water-closet, with its specially-shaped seat, is admirable, especially for aged persons or children. This firm also show their patent "Hydro-Pneumatic" closet with siphonic discharge, which flushes and recharges with two gallons of water.

The British Sanitary Company exhibit their well-known earth-closet, which acts automatically.

The Brighton technical schools have an exhibit of plumbing work executed by the students, and the samples shown evince a high standard of craftsmanship.

We shall report the President's inaugural address and the papers read at the Conference in our next issue.

COMPETITION NEWS.

Usher Hall Competition.

It is to be regretted that the Architects' Technical Bureau in Hart-street has decided not to hold the exhibition of the drawings for the Usher Hall competition, for which it had been preparing. The winners of the competition, Messrs. Stockdale Harrison & Howard H. Thomas, FF.R.I.B.A., are so pressed in the preparation of working drawings that they are unable to lend their competition set, and it is thought that this omission from the exhibition would deprive it of too much interest.

Winchester School.

We regret that an announcement of a competition for a primary school in Winchester appeared in our competition epitome column of last week's issue. The competition in question has been closed and the awards have been made. Our sincere apologies are due to any of our readers who may have written for particulars for their trouble and disappointment.

OBITUARY.

William Holman Hunt.

We regret to announce the death of Mr. William Holman Hunt, O.M., which took place at his residence, Melbury-road, West Kensington, on Wednesday morning last. With his going the Victorian Era seems finally to have passed away. The painter was born in Wood-street, E.C., in April, 1827. Young Hunt commenced life, in the ordinary sense of the term, at the age of twelve, when he entered an office in the City. The boy employed his leisure in reading, drawing, and painting, and really began his career as an artist at the age of sixteen. He was, however, nearly thwarted, for he twice failed to pass the examination for a studentship in the Royal Academy schools. His father uttered the awful threat that he would have to return to the City if he failed a third time. The third time was the lucky one, and young Holman Hunt had the path of success open to him. This was in the year 1845, when he was eighteen years old, and next year he exhibited his first picture. It was at the Royal Academy schools that he made the acquaintance of John Everett Millais, his friend through life, who was about three years Hunt's junior. Here also that the young painter found his purpose in life, but he found it by criticising, not by slavishly following his masters. For Landseer, Maclise, Haydon, and Collins he had admiration, but his artistic instincts revolted from the insincerity, the sham, the "pretty-prettiness," the false sentimentality, the decadent classicism, of a period when English art was very "Early Victorian." Rossetti and Millais were closest to him in friendship. In 1848 he and Rossetti shared a studio. On one of their nights, when the three of them were turning over a volume of engravings of the Italian painters, Mr. Hunt said:—"Decadence began with Raphael. In these early masters one sees the simplicity, the truthfulness, earnestness of great art." With an enthusiasm which seemed to them divine and enduring, Holman Hunt, Rossetti, and Millais, resolved to bind themselves into a society, animated by the pure ideals of the Pre-Raphaelite painters, of whom there were seven altogether. Mr. Hunt remarks in his reminiscences:—"The majority of the seven only talked." The history of the Pre-Raphaelite Brotherhood and the tale of the ridicule and abuse to which its members were subject, is too well known to need recounting. Of them all, only Holman Hunt remained absolutely true to the principles of the P.R.B. until the time of his decease. Mr. Hunt's inspiration in his early days was entirely literary. It was in 1850 that he began that series of religious and mystical subjects, whereby he has since made himself best known. The "Triumph of the Innocents" is generally considered the most serious labour of Mr. Hunt's life. His "Light of the World" is too well known to require more than a passing reference. The artist's larger copy hangs in St. Paul's Cathedral, where it can be seen in the south aisle of the nave. In the year 1880 Mr. Holman Hunt delivered a lecture at the Society of Arts upon the need of greater knowledge and care on the part of artists in the preparation of the materials, upon the perfection of which they have to rely for the permanence of their works. This, at the time, awakened much attention to the matter, and still encourages research for better methods of obtaining superior preparations. Mr. Hunt had the honour of receiving the Order of Merit, a D.C.L. Degree honoris causa, and he was a member of the Athenæum Club.

THE
BUILDER.

SEPTEMBER 10, 1910.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 18s. per annum, with delivery by *Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 12s. 6d. per annum; and to all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 16s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

MEETING.

MONDAY, SEPTEMBER 12.

The Incorporated Clerks of Works' Association (Carpenters' Hall, London-wall).—Mr. John Davies on "The Smith: His Tools and Work in the Past and Present," 8 p.m.

CORRESPONDENCE.

Contracting in the Building Trade.

SIR,—I read with much interest your remarks under the above heading which appeared in your issue of the 3rd inst., and as a constant reader you have my best thanks for directing attention to the letters which were published in the *Glasgow Herald* concerning this subject.

The questionable practice in existence north of the Tweed seems to have permeated that portion of England north of a line running due west from the Humber to the Mersey, and may be due to the plodding perseverance of our competitors from across the Border, who appear to have as great an aptitude for securing and holding public appointments in England as the less obtrusive but more likeable Irishman is noted for in America, with this difference, that once a Scotchman is in authority he will never rest, no matter be he in public or private service, until he has replaced all subordinates by Scotchmen, and substituted our business modes of procedure for that more doubtful commodity which prevails in the land of cakes.

As to your mild retort to the correspondent who avers that to give out a contract to one sole contractor invariably leads to what Americans call "graft," I know of no one but a Scotchman that would make use of any such statement, seeing how generally in the midland and southern counties of England the main contractor system prevails.

From an extensive experience of both sides of the question I have formed a very definite opinion, and not merely as regards the recognition of sub-contractors by the owner or his agent. I have every reason to advocate wherever possible, and it is only with the very small men it is impossible, the actual employment of the workmen in each and every one of the allied trades by the sole contractor, thereby abolishing a very unnecessary evil, viz., the employment of a sub-contractor, who, as a rule, requires as much looking after by the builder's foreman, and as much supervision on the part of the builder, as a staff of workmen.

The presence of sub-contractors on large contracts invariably involves serious delay, possessing, as they do, an organised disinclination to respect the work of other trades, a superhuman gift for creating friction with the architect or engineer, and an inherent aptitude for violating the conditions of agreement governing the main contract.

These things and many others, too numerous to mention, not forgetting the serious complications in regard to workmen's compensation insurance, I feel, sufficiently warrant one in strongly advising all respectable contractors, except in very special circumstances, not only to discourage the recognition of sub-contractors by architects and engineers, but to set an example by directly employing the workmen of the various trades.

I shall look with interest for opinions on this subject from other readers of your valuable paper.

A SUPPORTER OF THE MAIN CONTRACTOR SYSTEM.

INTERCOMMUNICATION COLUMN.

Noisy House.

SIR,—I recently inspected some houses ranging in value from 3,000*l.* to 5,000*l.*, and the builder tells me he has specially avoided stud partitions, using brick walls 4½ in. thick, partly on account of stability and partly to prevent noises penetrating so easily.

The plastering is of ordinary three-coat work, without the addition of any quick-setting preparation, and yet I find that noises made at one end of the house are more easily heard at the other end than I should have thought possible in a really well-built house.

For the ground floor 1¼-in. grooved and tongued boarding has been used, but 1-in. square edge for the upper floors to provide a little ventilation for the joists and prevent dry rot.

Can you tell me why such a house should be so "noisy," and what would effect a cure? If so, and you would kindly give your readers the benefit of your remarks on the subject, you would, I feel sure, greatly help many of them, including ANXIOUS.

*** 4½-in. brick walls transmit sound somewhat freely, especially if well built; hollow breeze concrete slabs are more soundproof. Floors should have sound boarding and plugging; it is not stated if this is the case. It may be mentioned that an empty house seems much noiser than when it is occupied. Perhaps some of our readers can suggest other points.—ED.

Medical Mission Station.

SIR,—Being an architect practicing in China, and a reader of the *Builder*, I take the liberty to answer your correspondent's inquiry regarding a residence for a medical mission in China

I know of no such publication; the plans and specifications vary so much with the different provinces and local requirement.

The price stated is rather low, especially with the present low exchange.

E. H. ROUSE.

LONDON COUNCILS.

Barnet.—The Urban District Council has passed plans for Messrs. Boots, for alterations to 122, High-street, also for Mr. H. P. Eames, for twelve houses at Underhill.

Deptford.—Mr. Carnegie agreed, some years ago, to give a donation of 9,000*l.* in respect of the Central Library. The Libraries Committee of the Council recently took under consideration the probable cost of the building to be erected for the purpose of a Central Library in Lewisham High-road, on the corner of Rokeby-road. Being of opinion that 9,000*l.* would not be sufficient, Mr. Carnegie was again approached, and the Committee now report that he has agreed to increase his gift to 12,000*l.* Steps are being taken to clear the site. With regard to the New Cross Branch Library, sufficient progress has been made for the laying of the foundation-stone. On and after November 12 the area of the Metropolitan Borough of Deptford will be constituted a new District Surveyor's district, designated Deptford. Plans have been passed for stands at the Millwall Football Club's Ground, Cold Blow-lane.

Hendon.—The Rural District Council has passed the following plans: Mr. W. Chappell, thirty houses and four shops, Church-lane Estate, Edgware; Mr. T. Smith, six villas, Melrose-road, Pinner; Mr. W. T. Tomkins, six houses, Cornwell-road, Roxborough Close Estate; Mr. H. W. Watts, six houses, Cornwell-road; Mr. E. Cremer, four houses, Church-road, Little Stanmore.

Staines.—Mr. T. W. Crutchfield has had plans passed by the Rural District Council for the erection of a temporary iron church in Dawley-road, Harlington.

Twickenham.—Mr. W. C. Phillips has had plans passed for a cinematograph theatre in Richmond-road. Mr. R. Skinner has lodged plans for four houses, River View-gardens.

Wimbledon.—The second section of Havana-road is to be made up in accordance with the specification of the Borough Surveyor, at an estimated cost of 173*l.*; 214*l.* is to be spent in relaying the surface-water drain in Graham-road and Herbert-road; repairs are to be carried out in three roads at an estimated cost of 305*l.* Plans have been passed as follows:—Mr. W. Rogers, alterations and additions to the ladies' Golf Club House, Wimbledon Common; Mr. E. T. Manley, shops and houses, Durnsford-road. Mr. A. S. Hurst has lodged plans for a cinematograph theatre in Merton-road.

FIFTY YEARS AGO.

From the *Builder* of September 8, 1860.

Illuminating Clocks.

THE present mode of illuminating (!) our public clocks is unsatisfactory, all must admit. Why attempt the lighting of the whole dial? Why not rather point the hands with an electric star, by means of a wire or wires edging the two hands, meeting and producing combustion at each point? The intelligence that will seek the time on a dark night will be satisfied by the relative situation of the two star points of white light so produced, even though the whole dial be utterly invisible. I merely suggest this as probably within the capabilities of science. C. DENT.

*** The merits of the system suggested might well be considered at the present time.—ED.

ILLUSTRATIONS.

London County Hall.

THIS drawing represents Mr. R. Knott's revised design for the river front of the London County Council Hall. It was noticed in our review of the Royal Academy Exhibition on May 7.

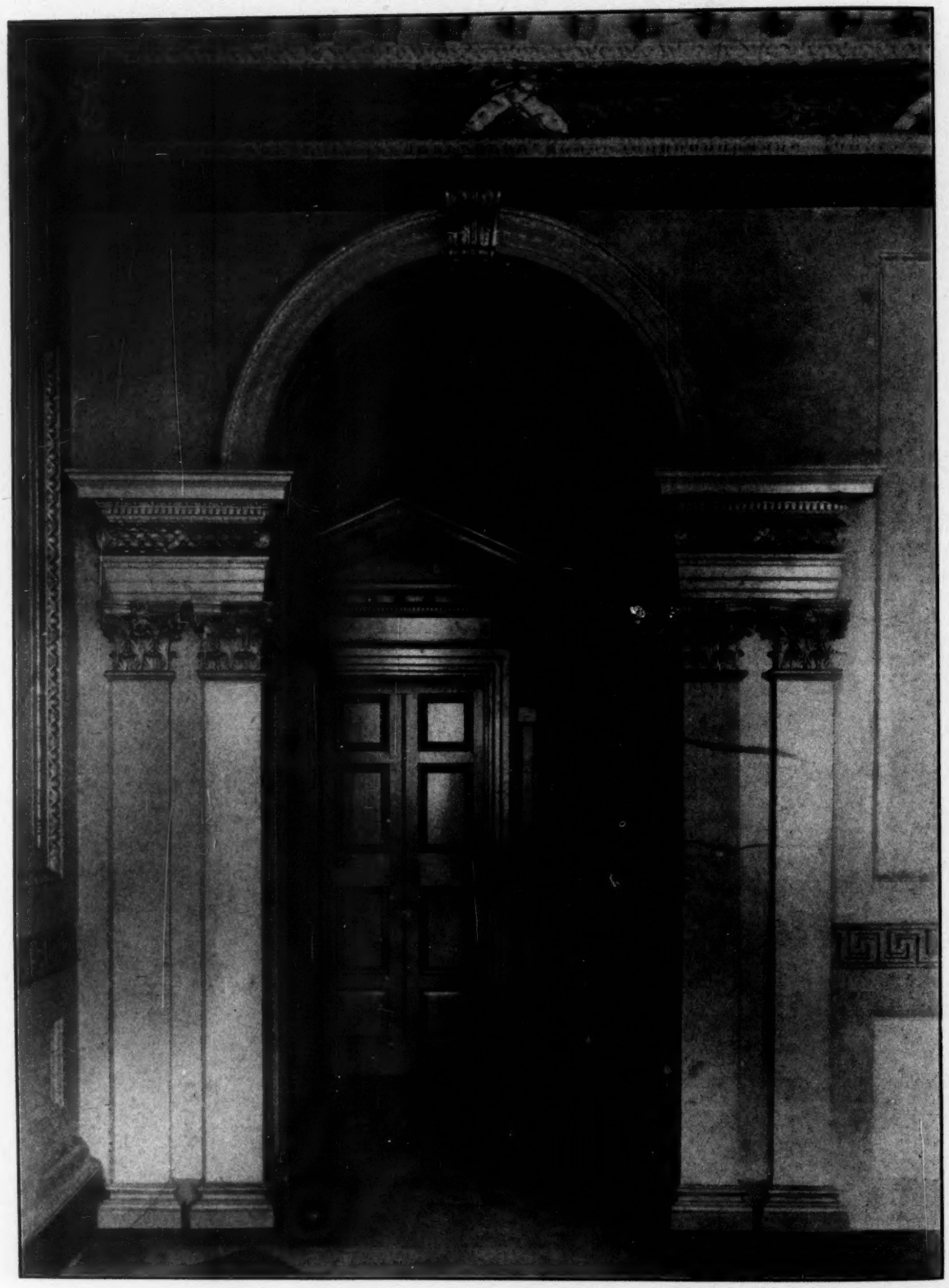
Details of Georgian Work in Dublin.

REFERENCE to these illustrations is made in our review of the work of the Georgian Society, to whom we have to express our indebtedness for permission to publish these striking examples of XVIIIth-century work.

FOREIGN AND COLONIAL.

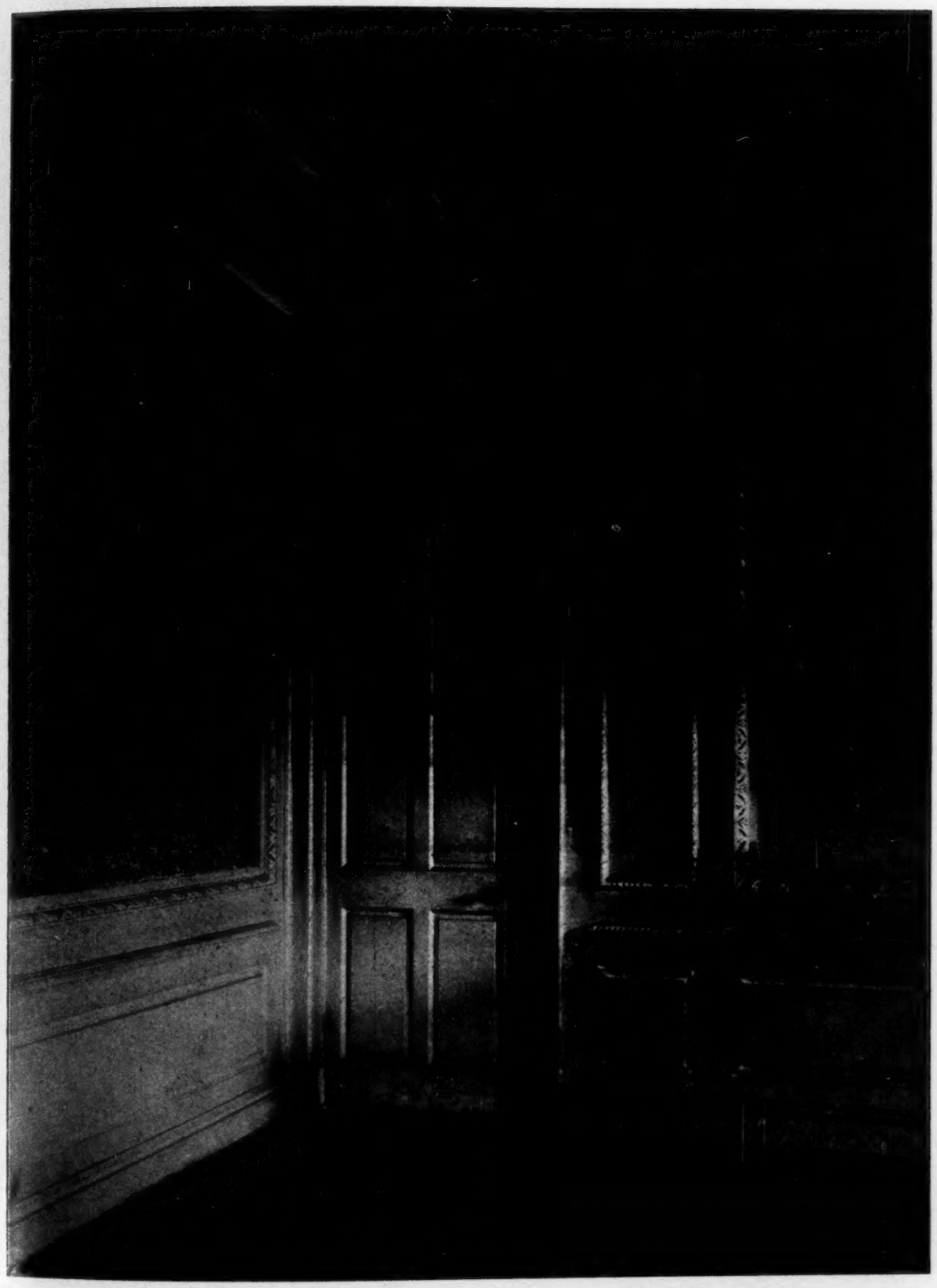
The National College of Buenos Aires.

The *Boletin* of July 30 contains a decree, issued by the General Directorate of Architecture, approving the contract with Messrs. Zacarias Marioni y Hermano for the construction of a building for the National College of Buenos Aires. The cost of the work is estimated at 2,122,536 pesos currency (about 186,000*l.*).



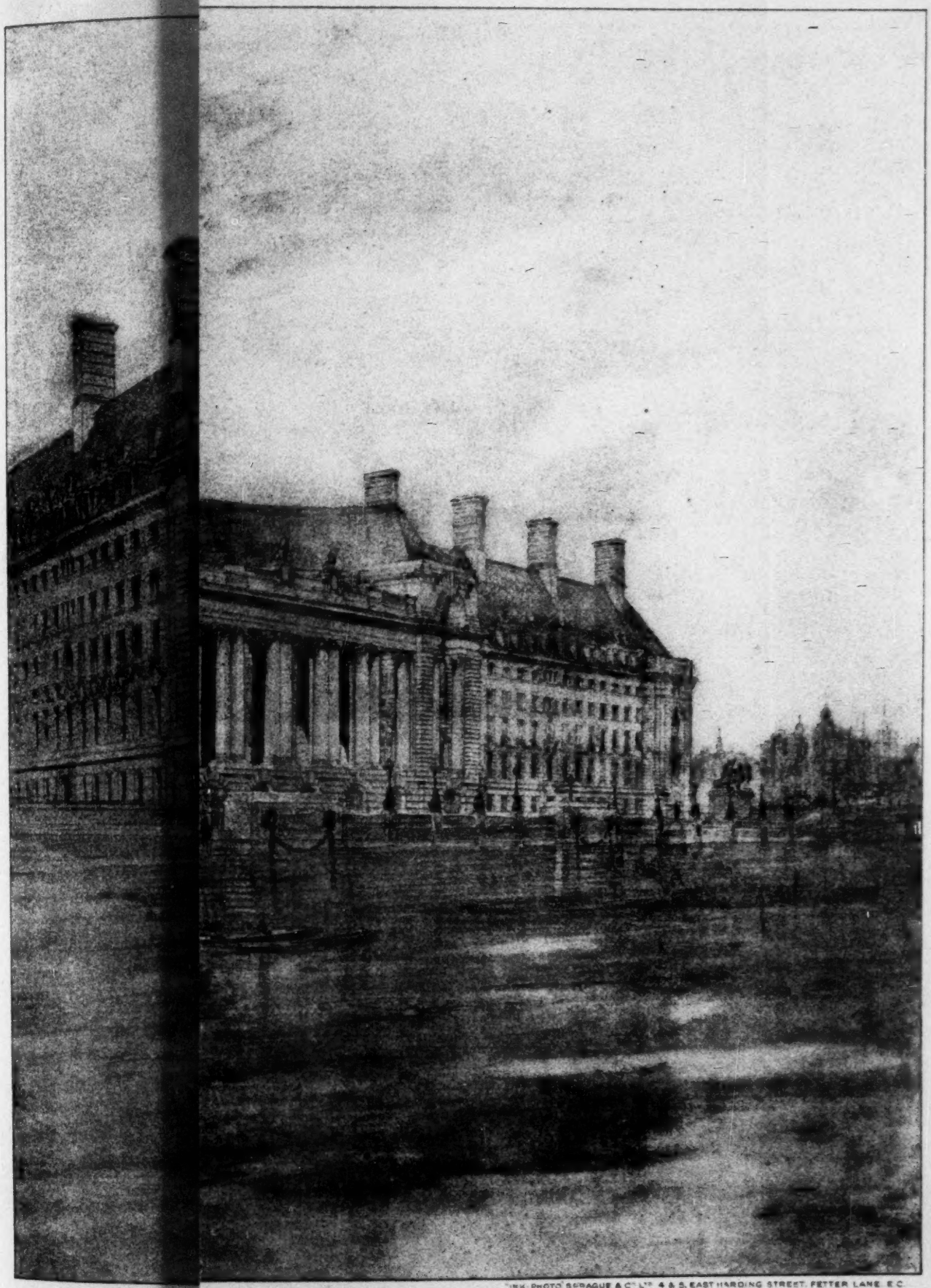
Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

DUBLIN: No 9 HENRIETTA STREET. ARCH ON STAIR LOBBY, WITH DOOR LEADING TO DRAWING-ROOM.



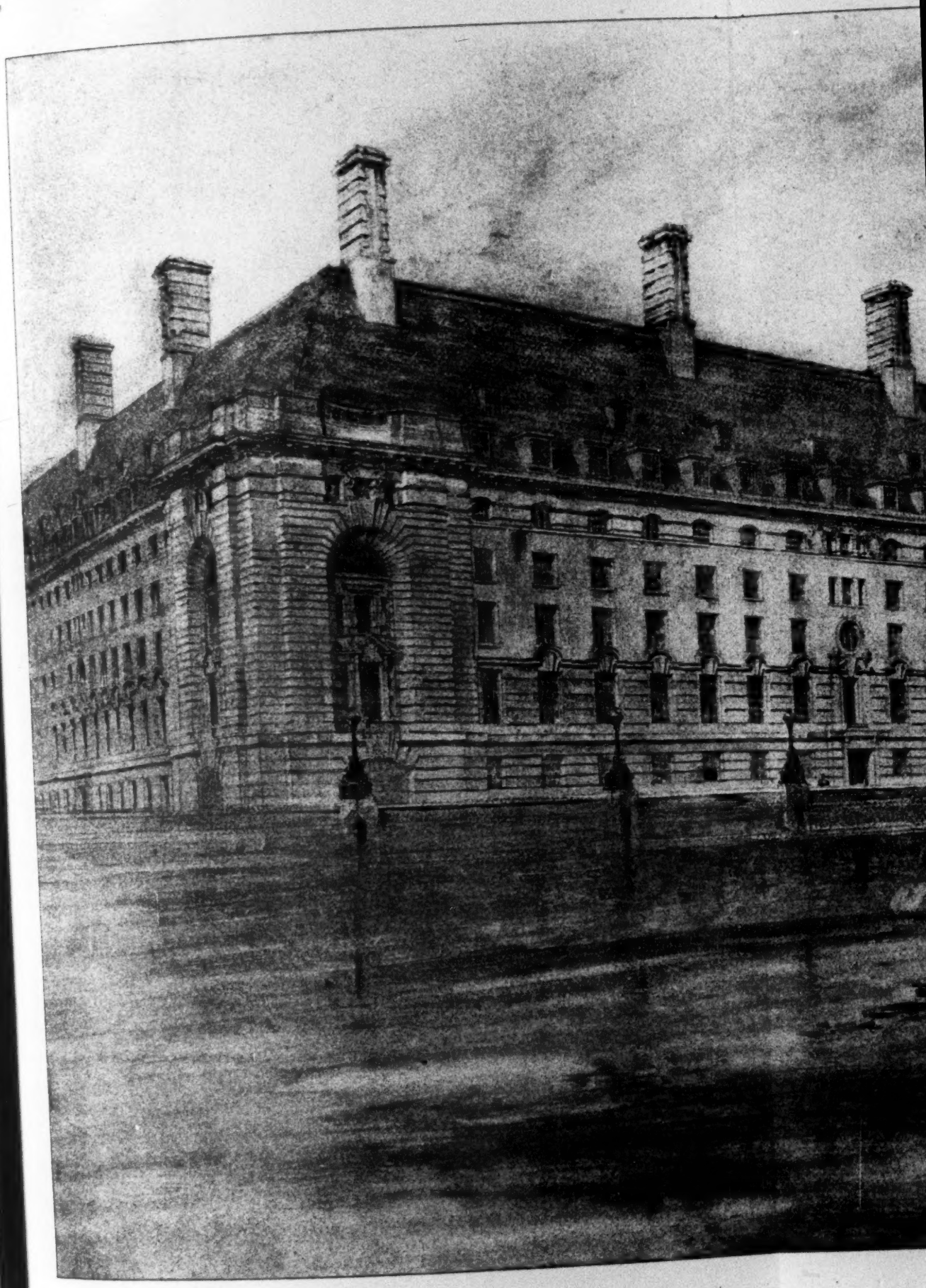
Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

DUBLIN: No. 10 HENRIETTA STREET. CORNER OF ROOM ON GROUND FLOOR.



"INK-PHOTO" SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

Royal Academy Exhibiti



Royal Academy Exhibition, 1910.

INK-PHOTO SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET FETTER LANE E.C.

EW LONDON COUNTY HALL.—Mr. Ralph Knott, Architect.

MONTHLY REVIEW *of* CONSTRUCTION.

Fig. 1. Savoy Hotel Extension. General View from Victoria Embankment.

SAVOY HOTEL EXTENSION.

STRUCTURAL works of a particularly interesting character are now in progress at the Victoria Embankment part of the Savoy Hotel. Briefly stated, the works include the virtual abolition of the main wall hitherto constituting the façade and the construction of a new wall about 8 ft. 6 in. nearer to the river, so as to increase the size of all the bedrooms and to provide bath, lavatory, and other sanitary conveniences in either one or two small rooms directly accessible from each

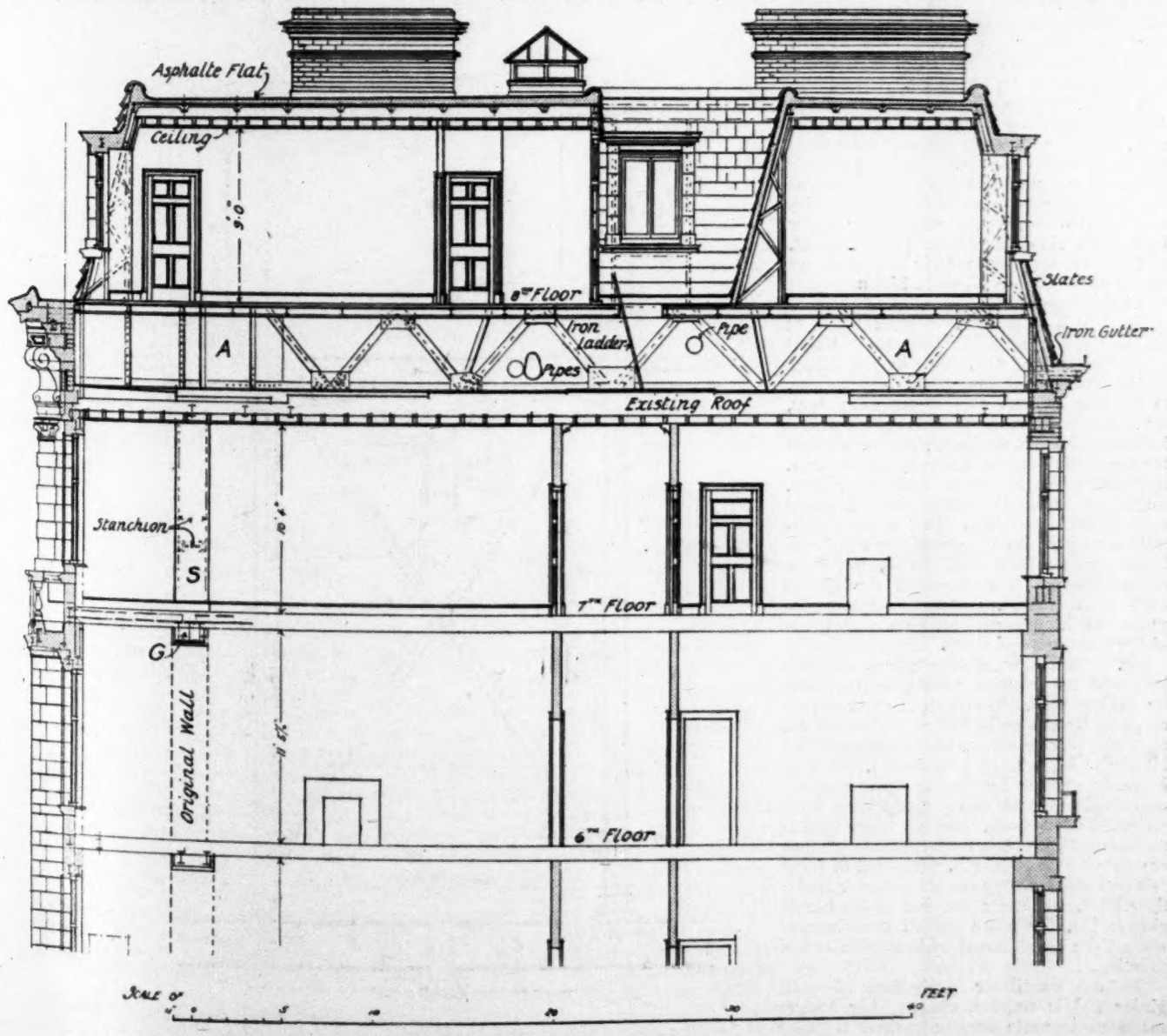


Fig. 2. Cross Section, Savoy Hotel.

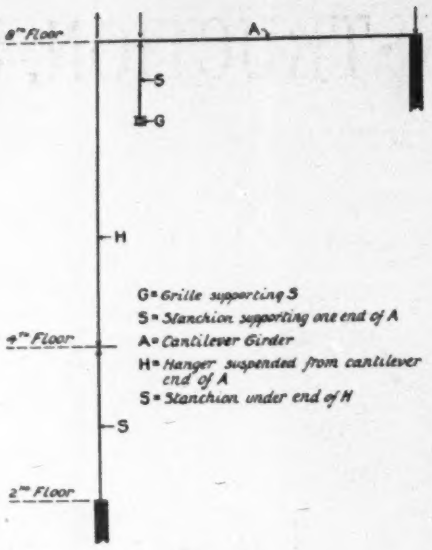


Fig. 3.

apartment. In addition, the old mansard story over the entire block is being enclosed by an upward extension of the outer walls, and above it a new mansard story is under construction. Between the top of the old mansard roof and the floor of the new mansard story there is a space about 6 ft. high, traversed by eighteen large lattice girders whose ends project as cantilevers for suspension of the new front wall, and affording excellent accommodation for hydraulic and other pipes. The space will also serve the useful purpose of isolating the staff quarters in the new mansard story from bedrooms on the floor below.

It should be stated that the extensions commence at second-floor level, immediately over the well-known Savoy Restaurant, whose front projects some 14 ft. beyond the old façade of the upper stories.

In order to provide for execution of the work without disturbing residents in the hotel, and without obscuring the view from the restaurant windows, a most complete system of scaffolding has been erected along the front and ends of the building with substantial working platforms at the upper floors and a wide gantry above the restaurant, in front of which the lofty supports are spaced at wide intervals and with due regard to window openings.

Fig. 1 is a view giving a general idea of the scaffolding, which includes some 10,000 of the "Scaffixer" ties, made by the Patent Rapid Scaffold Tie Company. The towers, to be seen at each end of the falseworks, are fitted with several of Waygood's lifts for materials and workmen, and so obviate the use of the customary cranes and derricks. Materials are delivered at each floor level, where the working platforms furnish ample storage accommodation. In the same illustration may be seen some of the cantilever lattice girders mentioned above, but since the photograph was taken all the girders have been erected, and considerable progress has been made towards completion of the new mansard story.

Fig. 2 is a cross section where we have indicated the position of the original wall by broken lines. This wall is cut away as required by the extension of the bedrooms, and the construction of bathrooms and lavatories in connexion therewith, the load formerly carried by the brickwork above seventh-floor level being transferred to a series of stanchions, one of which (S) is represented in broken lines. The stanchions are based on a grille (G), composed of three I-beams supported by the old wall at seventh-floor level, and carry one end of the lattice girders (A), the other end of these resting upon the wall at the right-hand side of the drawing.

To the cantilever projection of each girder (A) is fixed a channel bar hanger made of separate lengths spliced together and reaching down to fourth-floor level. These hangers act as vertical members in the steel frame designed to carry the brick curtain walls of the new façade, and may be described as inverted stanchions. The practical effect is that the whole of the wall construction from end to end of the building and from the top of the seventh story down to the top of the third story is literally hung from the ends of the cantilevers (A).

This remarkable hanging wall is braced laterally by the floor beams of the extended bedrooms, and the hangers are connected at the bottom with a series of channel stanchions rising from a new girder at second-floor level. The stanchions support the framework in two stories of the wall, and are capable of taking part of the load coming on the hangers, the latter in turn being equally capable of taking part of the load allocated to the stanchions. Neither hangers nor stanchions are represented in Fig. 2, but the complete arrangement is diagrammatically illustrated in Fig. 3, and in considering details of the construction we will follow the sequence denoted by this diagram.

Fig. 4 contains typical details of the grille (G), two stanchions (S), and cross sections of two lattice girders (A). The grille consists of three 12-in. by 6-in. 54-lb. I-beams connected by separators and bolts. The stanchions consist of one 12-in. by 6-in. 54-lb. I-beam, and two 6-in. by 3½-in. channels, the two stanchions here shown being braced by 3-in. by ⅜-in. angles. In one case girder A is secured directly to the head of the stanchion, and in the other it comes at a point where there is no stanchion immediately below, and consequently is attached to the connecting grille of three 16-in. by 6-in. 62-lb. I-beams.

The girders of the new mansard story vary slightly in length, but may be taken at the average of 50 ft. long from end to end. Details of the construction are so clearly shown that no explanation of this drawing is needed. It will be noticed that the cantilever projection of the girder here represented measures 7 ft. from the centre line of the supporting stanchion Some of the pipes already in the chamber between the top and bottom flanges of the girders are shown in this drawing, and we are informed that many others will be added after completion of structural alterations to the hotel.

For the assembly and erection of the heavy girders, stanchions, and steelwork above the old roof the engineering contractors (Messrs. A. Handyside & Co., of Derby) have laid down a track providing for the operation of a travelling crane commanding every part of the building from end to end. The work of classifying and identifying the numerous steel members and parts of members has been wonderfully facilitated by the adoption of different coloured paints, and by the identification letters and numbers stencilled upon the ends of all parts of the steelwork. To permit the conduct of work during the night the contractors are making liberal use of powerful acetylene lamps of the portable type. Without actual inspection it is difficult to realise fully the extent of the operations and the excellent organisation established for their execution. To those of our readers who are interested in steel construction a visit to the Savoy Hotel extension would prove highly interesting at the present time.

Details of typical hangers (H) and the corresponding stanchions (S) will be found in Fig. 5, where the connexions for various

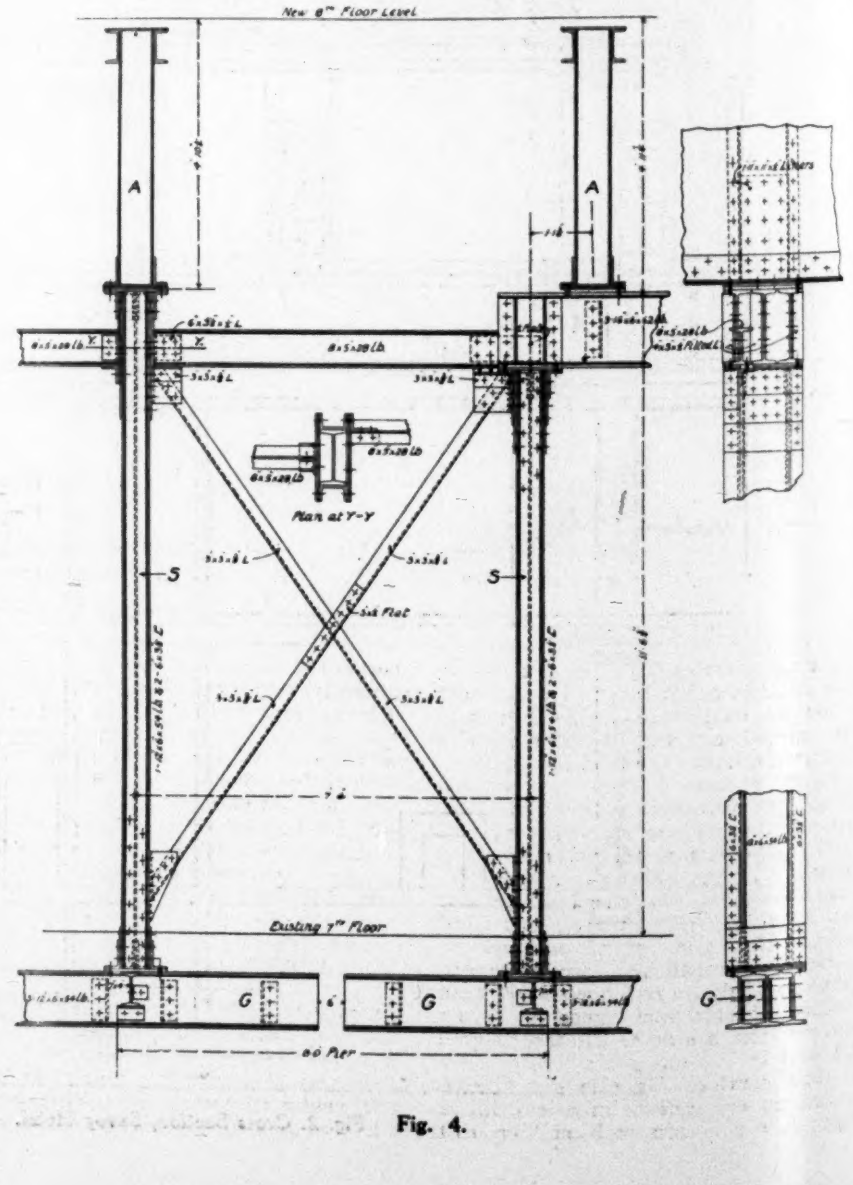


Fig. 4.

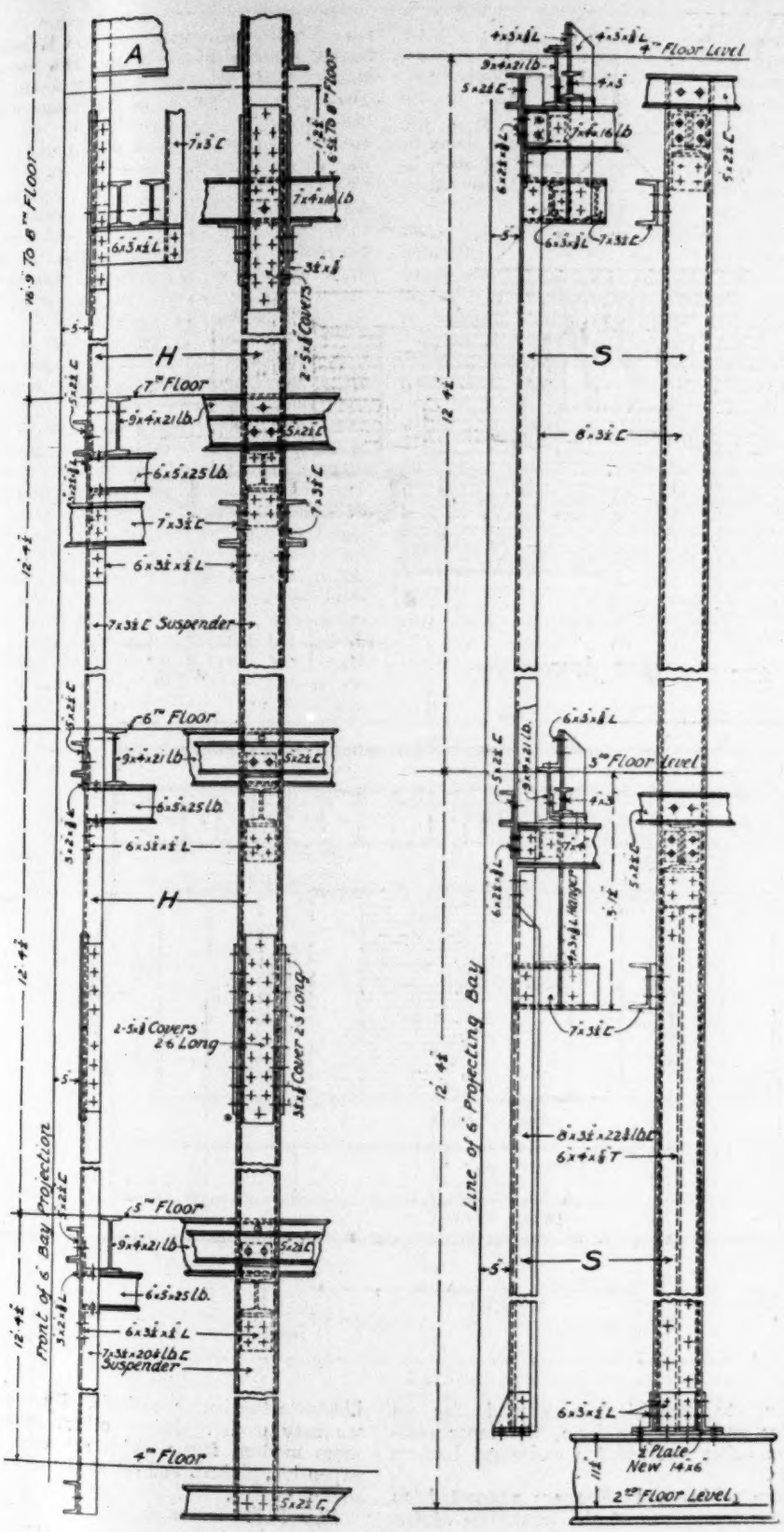


Fig. 5.

horizontal members of the steel frame are also shown in full detail. As before mentioned, the hangers pass downward through four stories and the stanchions upward through two stories of the extension.

Fig. 6 illustrates in plan and section one of the cantilever balconies which have been constructed in the new upper portion of the walls at the east and west ends of the hotel. It will, of course, be understood that the stone outlines on the engineers' drawings now in question only roughly indicate the architectural features of the balconies.

The new mansard story will be covered with green tiling and the façade with Doulton's Carrara ware, giving the appearance of white marble to the new front of the building.

Large quantities of this ware are already stacked on the scaffold platforms, and as soon as the suspended and supported portions of the steel skeleton are finally completed gangs of men will commence building in the curtain walls from all floor levels simultaneously, so as to execute this part of the work in three weeks. This expeditious method, generally adopted in America, has only become practicable in London since the revision of the retrograde Building Act, which for so long a time has hampered architects and builders.

In addition to the vastly improved accommodation in the enlarged bedrooms, the conversion of the old mansard story and the story added above will provide thirty suites of additional rooms, and by covering in the courtyard behind the embankment block a banqueting-hall capable of seating 500 people will be added to the hotel.

In view of the heavy losses sustained by the hotel company during the conduct of operations, the time for completion was limited to three months, and so far as we can judge from the admirable organisation of the contractors, the large number of men employed, and the forward state of the works, we should say that everything will be finished within the specified period. Work is carried on day and night by two shifts, and we understand that nearly a thousand men are engaged in different classes of work.

With a view to expedition, the scaffolding was entrusted to the Patent Rapid Scaffold Tie Company, Ltd., Victoria-street, Westminster. It is about 130 ft. high and has a total frontage of about 400 ft. A remarkable feature of the scaffolding is the fact that it was erected in one-fourth of the

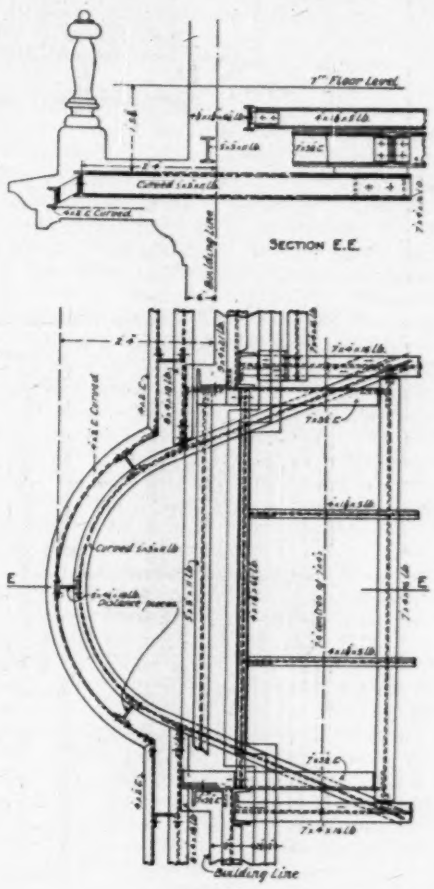


Fig. 6.

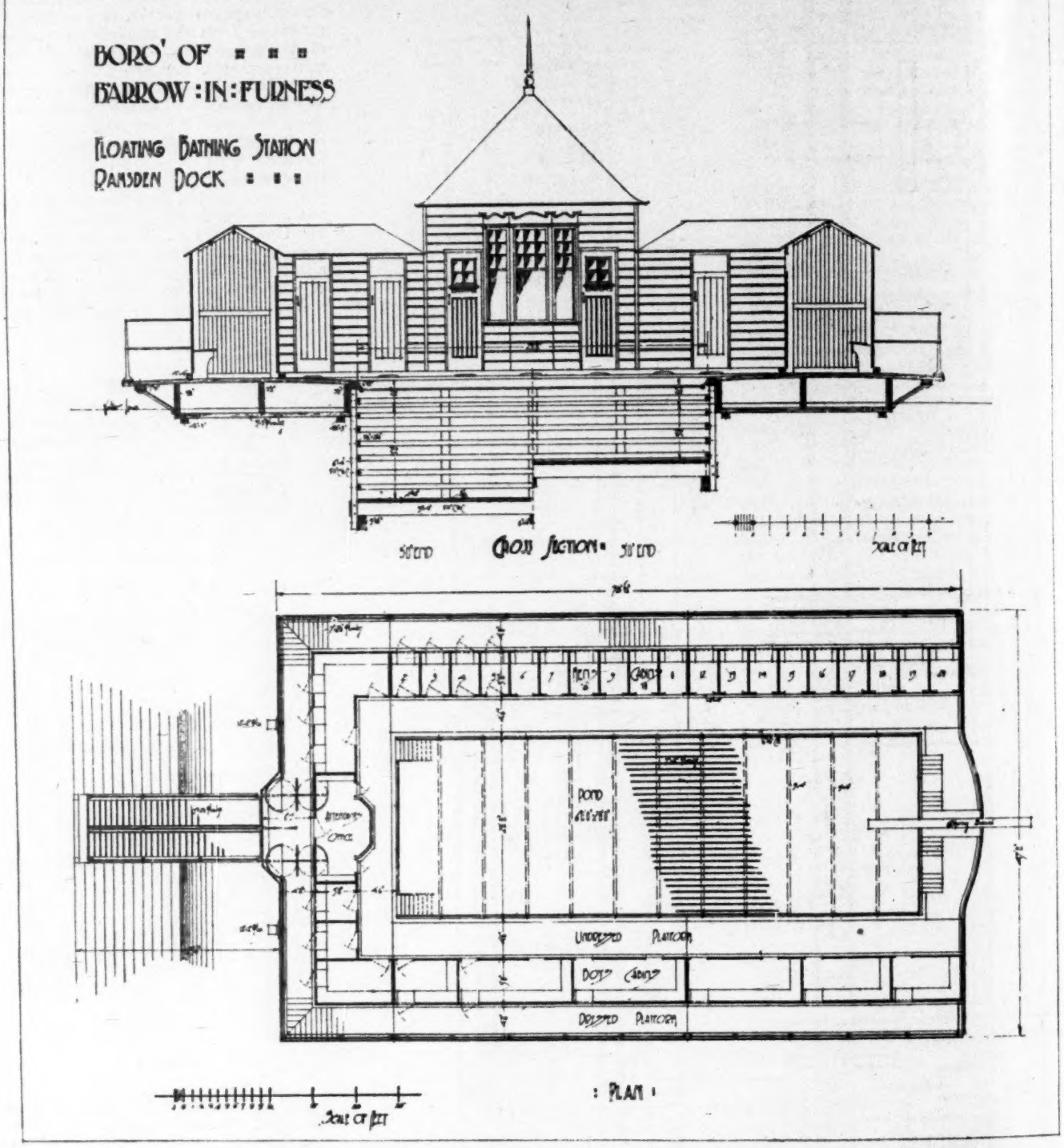
time that it would have taken had cords been used, and at a very much reduced cost. Some idea of the enormous strength of Scaffixer ties may be obtained when it is stated that every platform of this gigantic scaffold was simultaneously loaded far beyond what would have been possible had cords been used, and it is of interest to note that every platform of the scaffold was being worked at one and the same time.

The extensions here briefly described were designed by Messrs. T. E. Collcutt & Stanley Hamp, of Bloomsbury-square, with the co-operation of Messrs. Reade Jackson & Parry, of Bedford-row, as consulting engineers. The general contractors are Messrs. Leslie & Co., Ltd., of Kensington, the sub-contractors for the steelwork being Messrs. Andrew Handyside & Co., Ltd., of Derby.

BARROW-IN-FURNESS PUBLIC SWIMMING-BATHS.

THE question of erecting public baths has received the attention of the Barrow Council from time to time, who consider that there are several more necessary schemes which must have preference.

It is estimated that about 25 per cent. of the houses in the town are fitted with a bath, and as parts of the shore on Walney Island are suitable for sea bathing the Council



considered that by providing within reasonable distance of the centre of the town a bath, to be hereinafter described, a costly scheme which would entail a charge on the rates could be postponed.

Under private control there is a swimming-bath, a Turkish bath, and slipper baths, but the buildings were erected in 1873, and do not meet the present requirements of the town.

The only swimming-bath under the control of the Corporation is the floating bath, which was constructed in 1908, and is situated in Ramsden Dock.

The plan and section show the accommodation and construction of the floating bath. The design is believed to be entirely original, and fairly illustrates the wide scope of the municipal engineer's duties. The accommodation provided is a swimming-pond, 60 ft. by 20 ft. by 6 ft., tapering to 3 ft. 7 in., with diving platforms, etc., dressing accommodation for twenty-five men and fifty boys, an office and conveniences on shore. Provision is also made to enable swimmers to use a portion of the dock.

The swimming-pond is secured by one and one-eighth diameter cotters and eyes to pontoons which surround the pond, and on which are erected the dressing cabins, office, etc., provision being made for an outer and inner platform, the inner platform being reserved for undressed bathers only.

The cabins and office are supported on six pontoons, one at the front, one at the back, and two at each side, constructed of 3½-in. sides and division, 3-in. bottom and 2½-in. top, the seams being caulked with oakum and pitch. The depth of the pontoons is 2 ft. 2 in., and the draught unloaded is 14 in., 1 in. of displacement being equal to 4½ tons.

The whole of the woodwork, excepting the cabins, which are of red wood, is pitch-pine, the total weight being about 47 tons. The structure is constructed in sections so that any one of the six pontoons can be removed for cleaning or repairs.

Plans, specifications, and quantities were prepared by Mr. J. Walker Smith in the usual way, the work being carried out by a local contractor at a cost of 1,010*l.*

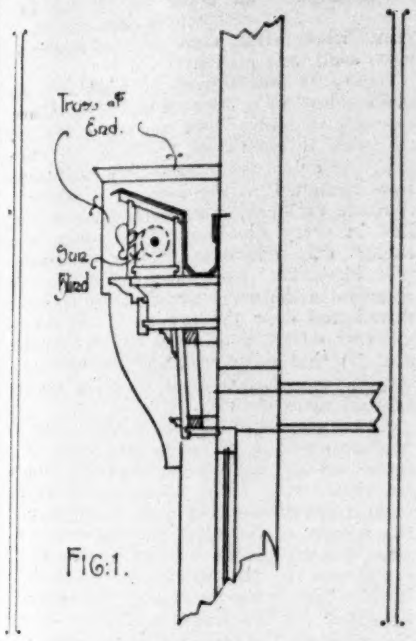
THE CONSTRUCTION OF SHOP FRONTS.

WITH this class of work it is desirable to occasionally note bad examples, calling attention to the various weak points, as well as illustrate the better methods. By so doing we may possibly induce others to adopt more modern forms which are often less expensive, plainer, and yet at the same time more effective.

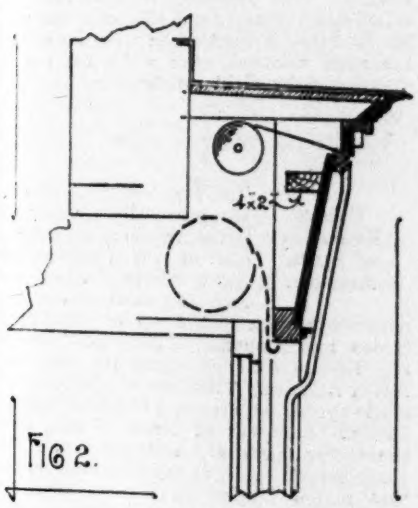
Fig. 1 illustrates an example to which our attention was recently called, apparently often used even now, though mainly in country districts. There is, however, no radical reason why work of this nature should not be more rational and effective in any situation. It will be observed in this figure that a roller sun blind has been superimposed above the cornice in separate boxing.

This arrangement not only forms an extremely ugly feature in itself, but also necessitates far larger and uglier trusses at the ends. From a technical and purely constructional point of view it is also very bad, the narrow gutter behind mainly proving a handy receptacle for leaves, stray paper, or any other light matter of a similar nature blown about in a high wind. Consequently it soon becomes blocked. If the shop happens to be on a corner or isolated site the gutter may be drained through a hole in the side of the truss. Such an addition of a rain-water pipe and head in this position does not look very pretty,

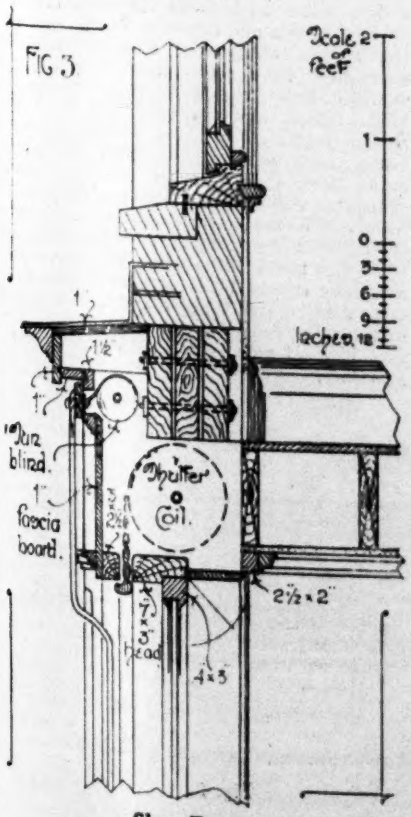
however. If the shop occupies a site between others even this cannot be managed, and the outlet pipe has to be taken through the cornice itself, a very objectionable



Shop Front.



Shop Front.



Shop Front.

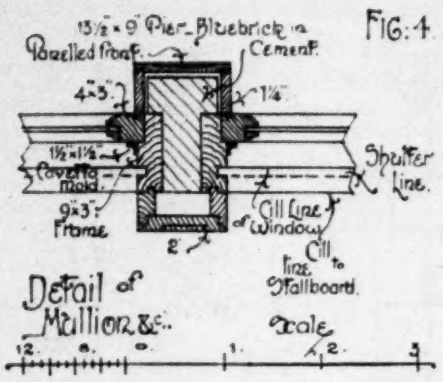


FIG:4.

Shop Front.

method. In cases where a sunblind is made an addition after the erection of a shop it would prove considerably cheaper to cut the front and adapt the existing cornice by inserting the blind inside, similar to Fig. 2.

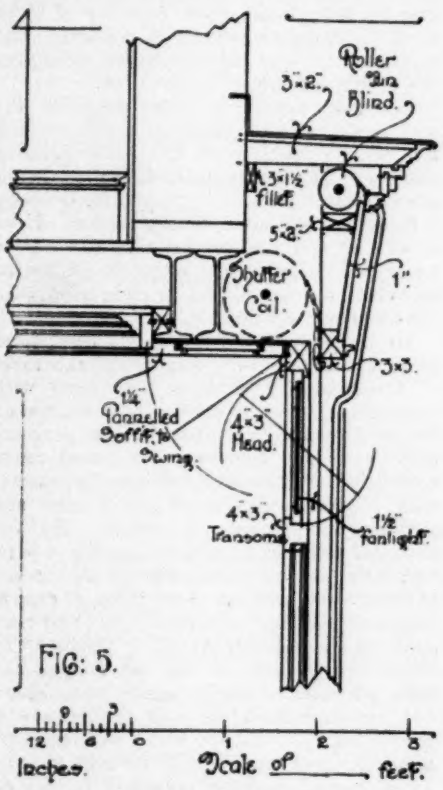


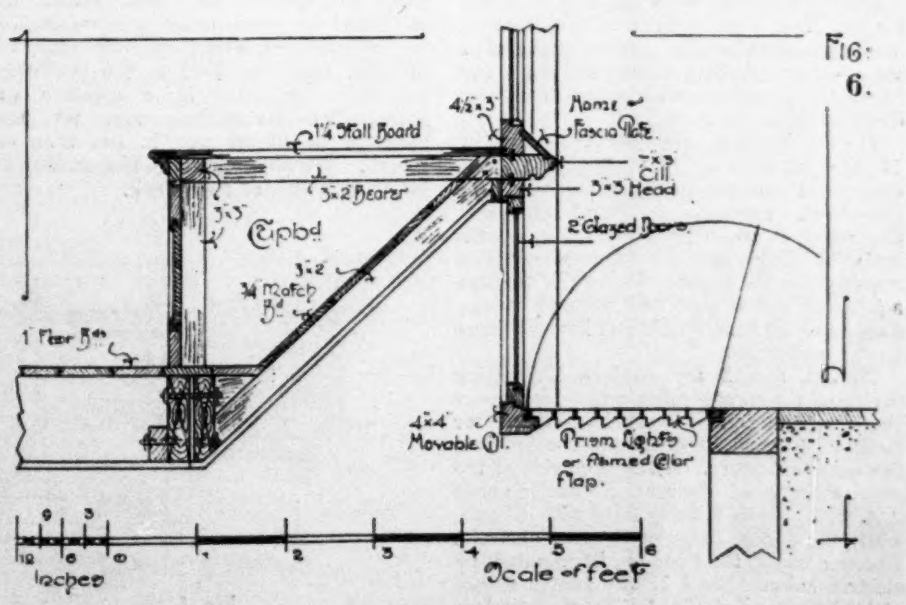
FIG: 5.

Shop Front.

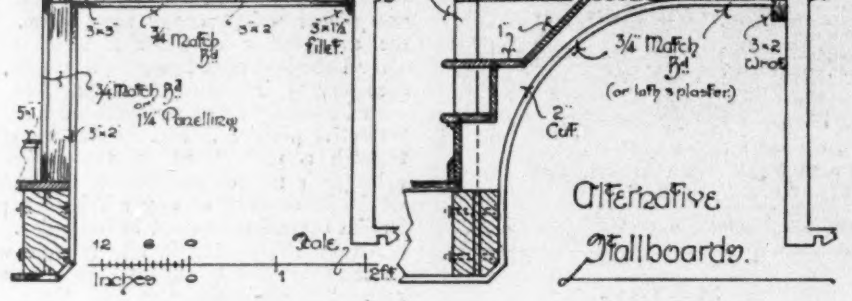
Fig. 3 gives a section through an ordinary front which has to be kept within the building line of main streets of city or town, showing shutter coil, etc., complete. When an exceptionally long frontage occurs it is usually advantageous or necessary to insert a pier or two; these might be constructed something after the style of Fig. 4, when no exceptional weight comes upon them. In the event of a considerable stress from several stories above it would, of course, be necessary to introduce steel stanchions, or use reinforced piers, duly calculated for their respective positions. Fig. 5 shows a section through a plain front on the projecting principle, a method occasionally used where set backs or right of way admit of a projection beyond the actual building line.

A front in this style invariably looks well, having somewhat the appearance of a large bay. The projection also from the actual wall-face above gives a better feeling of a base to the upper story or stories. The feeling that they are merely carried on a door entry and a few sheets of glass is not so strongly emphasised. The fanlight shown, in such cases where it can be reasonably introduced, is a considerable acquisition. The majority of shops being most inadequately ventilated, especially during hot seasons of the year, it is not always possible to fit small or medium class shops with such modern improvements as electric ventilating fans, etc., therefore sufficient ventilation should always be allowed for. Another point which ought to be considered, not infrequently entirely ignored, is that some means of access to the roller shutters should be provided. If some trifling thing happens to go wrong or require replacing, it generally means several workmen with a couple of large trestles, ladders, planks, tools, etc., to dismantle the cornice, blocking up the pavement for several days, usually during the busiest part of the week.

Neither will shutters run smoothly and easily for ever without the occasional assistance of a little oil. In the example shown provision is made for inspecting these fittings by means of a hinged soffit board, which admits of sufficient space for occasional attention, replacing fittings, or taking out the shutters from inside; or, once unfastened, they might be drawn down from the outside, if preferred, to prevent any disarrangement of the interior. The soffit board could be fastened at ends by means of stout flush bolts; in cases where of exceptional length further secured by one or more in the centre to ensure a light joint when bolted up. The space required for a shutter coil in ordinary wood shutters is about 9 in. to a foot, for a 10 ft. or 12 ft. length, or thereabouts. It is best, however, to obtain correct diameter for the requisite length from the firm supplying same, as sizes vary slightly. Concave steel roller shutters may also be obtained, which occupy far



Shop Front.



Shop Front

less space—about one-half—and are recommended as being burglar proof. They would at any rate be far more difficult to negotiate than ordinary wooden ones, therefore they have their special advantages for windows and doors to banks, jewellers' shops, etc. As regards the position of sunblind, it is best near the opening where shown, there being a better and immediate pull upon the roller when in this position. If preferred, however, for any particular reason, it may be placed further back, as shown on Fig. 2. Regarding the cornice, the ends of same usually look far better returned on to the actual building face, dispensing with the trusses, which form such an ugly feature in shop work. Plain trusses, however, have to be taken up inside the angles with solid mouldings blocked on to and mitred round them.

The detail of stallboard, Fig. 6, explains itself clearly enough. The soffit may be either matchboarded or lath and plastered. It is sometimes a great acquisition to insert a piece of plain panelling here containing a mirror, it being a considerable aid towards lighting the basement when the latter is utilised for work of any description. Fig. 7 gives an alternative bulkhead stallboard: in some cases the space here is required in the basement to admit of lowering large cases or other material. In others perhaps, where space is extremely valuable, every available inch being required both above and below, a semicircular plan may be adopted with advantage, as shown by Fig. 8. A couple of shelves might be formed, or a nest of pigeon-holes, which would be covered by sliding or folding doors or a series of drop flaps if so desired.

STRONG-ROOM AND FOUNDATIONS IN A BANK BUILDING.

SOME interesting work recently executed for the New York branch of the Bank of Montreal includes the construction of a strong-room weighing nearly 600 tons, and foundations for the same structure carried down to solid rock.

The strong-room measures 40 ft. long by 14 ft. 6 in. wide by 12 ft. 6 in. high, and consists of concrete in which steel rails are embedded. From the structural standpoint the room is perfectly independent of the main building, and the deep foundations required for its support were sunk through aquiferous soil to solid rock without causing damage to the bank building or inconvenience to the occupants.

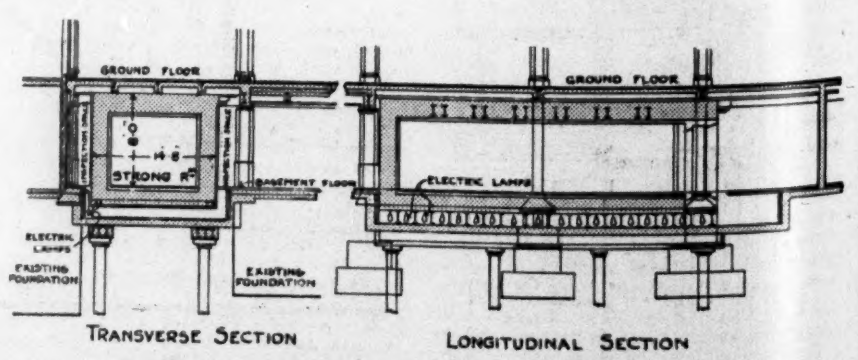
Figs. 1 and 2 are sections illustrating details of the construction, a novel feature of the design being the provision made for facilitating inspection of the strong-room from the basement story. Along each side of the room there is an observation passage about 2 ft. wide, the sides being lined with mirrors, while the spaces between the row of 18-in. I-beams under the floor are illuminated by electric lamps placed in the trench shown at the left-hand of Fig. 1. By an ingenious arrangement of mirrors every part of the underside can be inspected through glass plates at basement-floor level.

A reinforced concrete foundation slab extends over the entire area beneath the series of 18-in. I-beams, and transfers the load to two girders, each built up of three 15-in. I-beams embedded in concrete, and supported by four 12¾-in. tubular steel piles filled with concrete.

The first operation undertaken by the contractors was to excavate a pit between the column footings of the bank building and carried to the depth of 8 ft. 6 in. below the basement floor. A sump 8 ft. deep by 5 ft. square was sunk in the bottom of the general pit and lined with concrete to receive water and sand from the water jet apparatus intended to be employed in connexion with pile-sinking operations.

To accommodate the two compound girders, trenches were dug along the sides of the general excavation and lined with concrete. The eight tubular piles were then driven through holes left in the concrete flooring of the trenches. The steel tubes were driven by means of a pneumatic hammer with a head weighing nearly 2 tons and striking 160 blows per minute. As the material penetrated consisted chiefly of sand and water it was readily ejected by the aid of a water-jet and conveyed through canvas hose to the sump. After the tubes had been sunk to the required depth of about 18 ft. below the bottom of the pit stones and solid particles remaining inside were blown out by compressed air, and the piles were completed by filling the tubes with concrete after they had been cut off to uniform level by a special machine operated by an air motor. The time occupied in sinking the tubes was about one hour each, the piles being completed at the rate of two daily.

Each pile was finished by a cast-steel cap 22 in. square by 2 in. thick, and upon these were laid the two main foundation girders. After the girders had been placed and embedded in concrete the sump was filled in, and the reinforced concrete slab was moulded upon the floor of the pit, which was then completed by a concrete wall lining. The foundations and pit were executed by fifteen men in less than one month. The architects were Messrs. McKim, Mead, & White, of New York.



TRANSVERSE SECTION

Fig. 1.

LONGITUDINAL SECTION

Fig. 2.

A Bank Strong-Room.

Foundations of a Factory Building on Unstable Ground.

A LARGE building, for occupation as a jute mill, at Spezzia has recently been constructed on soil of particularly unstable character, consisting of an upper bed of soft clay overlying a deep stratum of peat, below which come beds of aquiferous peat, sand, and gravel.

Owing to the weight of machinery the average load to be imposed on the foundations amounts to nearly 7 cwt. per square foot, and in order to distribute the load over more than the entire site occupied the foundations were designed in the form of a reinforced concrete raft projecting beyond the building line in every direction. The reasons influencing this extension of the raft were: (1) That the loads transmitted by the columns in the walls would not be uniformly distributed over the ground if the foundations were terminated along the building line, and (2) that enlargement of the raft would obviate any sudden change of the pressure exerted upon the clay.

The raft represents a shallow form of caisson about 6 ft. deep, the sides being connected and the whole stiffened by interior transverse ribs. The upper surface of the caisson constitutes the floor of the factory, the weight of the machinery preventing upward flexure of the raft by reaction of the earth due to the weight of the building itself. The lower surface of the caisson is extended for the distance of 10 ft. beyond the walls of the mill, and is connected with each wall column by an inverted cantilever bracket. The building is constructed in reinforced concrete, and the boiler chimney, 164 ft. high, is founded on a circular slab of the same material, over which the load is distributed by eight counterforts.

Forest Resources of South America.

THE forests of South America are principally tropical, but in the Andes and the southern end of the Continent are found forests of a temperate and sub-arctic character resembling somewhat those of the United States and Canada. The tropical forests are totally different from the woods of North America. There are no solid stands of single species, or even of a few mixed species. Instead, hundreds of kinds of trees grow thoroughly mixed and scattered through the whole forest. This is one of several reasons that makes logging in tropical forests so expensive and often unprofitable. South American forests have only been cut into for a few miles back from the coast and the principal ports and drivers. In this area only the species at present most valuable for commerce have been thus far cut—for example, cedar, mahogany, rosewood, lignum-vitæ, fustic, and ironwood. Most of the woods growing in these forests are very heavy, hard, and rich in colour. Greenheart is so hard that it nicks the axes of the choppers, and will last for over 100 years in water. The great forest of the Amazon basin is 1,100 miles long east and west, by 750 miles north and south. It covers nearly a million square miles in Brazil. But, as it lacks construction timbers, it cannot be looked to for relief from the approaching scarcity in that kind of wood.—*Journal of the Franklin Institute.*

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

AUCHENCAMPBELL. — Academy (40,000*l.*); Burgh School Board.

Batley.—Weaving sheds at Union Mills for Messrs. J. Brook, Jubb, & Co.

Batley Carr.—Weaving sheds at Mills of Messrs. Newsome & Sons.

Bishop Auckland.—Alterations at old infirmary (500*l.*); Mr. W. Hope, builder, Coundon.

Blaydon.—Railway-station (2,500*l.*); Mr. W. Bell, architect, North-Eastern Railway, York.

Bolton-on-Dearne. — Proposed working-class dwellings, Highgate (9,500*l.*); Mr. J. W. Wilson, Surveyor, Bolton-on-Dearne Urban District Council.

Bournemouth.—Library (7,000*l.*); Mr. F. W. Lacey, Borough Engineer, Bournemouth.

Messrs. J. & M. Patrick, builders, Wandsworth, S.W.

Bradford.—Milk depôt; Mr. R. S. Kirkby, City Architect, Bradford.

Brighton.—Proposed working-class dwellings off Tillstone-street (3,800*l.*); Mr. A. Weller, Surveyor, Brighton Town Council.

Broomsknowl.—Drill-hall, offices, and range for Territorials (2,300*l.*); Messrs. Gillespie & Scott, architects, 4, Queen's-gardens, St. Andrews.

Broughton Ferry.—Proposed school on beach; the School Board.

Burntisland.—Villa (1,400*l.*); Mr. W. R. Simpson, architect, 6, Burntfield, Burntisland.

Carrington. — Elementary school (4,000*l.*); Mr. F. B. Lewis, Architect, The Guildhall, Nottingham; Mr. J. Evans, builder, Highbury Vale, Bulwell, Nottingham.

Clayton.—Enlargement, nurses' home; the Guardians.

Cleethorpes. — Pumping-station and parish hall; Surveyor, Cleethorpes Urban District Council.

Connahs Quay.—Primitive Methodist church (2,000*l.*); Mr. J. B. Thornley, architect, 45, Market-street, Darwen.

Darlington.—Bank, High-row and Bandgate, for the London City and Midland Banking Company. Bank, Northgate, for Lloyd's Banking Company.

Darwen.—School, Ross-street; Mr. R. W. Smith-Saville, Borough Engineer, Darwen Town Council.

Devizes (Wilts.).—Pavilion; Mr. A. E. Cole, Brickley-lane, Devizes.

Dewsbury.—Disinfecting station; Surveyor, Dewsbury Town Council.

Doncaster.—Buildings, North Bridge-road, for the Doncaster Trades and Friendly Societies Institute, Ltd. (6,500*l.*); Mr. F. W. Masters, architect, St. Vincent, Thorne-road, Doncaster.

Douglas. — Wesleyan Methodist Sunday-school (2,000*l.*); Pastor, Bucks-road Church, Douglas.

Dundee.—Boys' home, South Ellen-street; Manager, Dundee Industrial Schools Society. Plans and sections of proposed new buildings, etc., in Dundee, have been lodged at the office of the City Engineer as follows:—Constitution-road, alteration on property for the managers of Y.M.C.A.; Constitution-road, cinematograph enclosure for the managers of Y.M.C.A.; Dudhope Crescent-road and Bull-street, alterations on and additions to Drill-hall for Dundee Territorial Force Association; Forebank-road, temporary store for the Dundee Brattice Cloth Company; Hazeldrive, dwelling-house for J. N. Wallace; High-street and Commercial-street, alterations on premises for D. M. Brown; Lilybank-road, alterations on Lilybank Day Nursery for the Managers; Milne's East Wynd, condenser for M. & C. Hill, Ltd.; Perth-road and Small's Wynd, laboratories for the Council of University College; Whitehall-street, alterations on shops for Thomas Justice & Sons, Ltd.; Woodburne-street, Cottage for Maclaren, Sons, & Soutar.

Eastbourne.—The following plans have been passed:—Addition, warehouse, Commercial-road, for Messrs. Beves & Co.; Mr. J. Pattenden, builder. Eight houses, Greys-road, for Messrs. Miller & Selmes, builders; Mr. A. R. Crisford, architect. Addition, St. John's Vicarage, for the Vicar; Mr. A. R. G. Fenning, architect. Addition, St. Margaret's, Trinity-place, for Mr. H. Reid; Messrs. Geo. Gilbert & Co., builders.

Eaton Bray (near Dunstable). — Wesleyan Methodist Sunday-schools (600*l.*); the Trustees.

Eccles.—Plans have been passed for the Protector Lamp and Lighting Company, Ltd., for extension of works off Lansdowne-road, Monton.

Elworth.—Wesleyan chapel (500*l.*); the Trustees.

Epsom.—Fire-station, Church-street (2,000*l.*); Mr. E. R. Capon, Surveyor, Epsom Urban District Council.

Foleshill.—The Rural District Council has passed plans lodged by Mr. E. Pearson, for nine houses, Windmill-lane.

Gallatown.—Extension, school (2,500*l.*); Mr. D. F. Smith, architect, 210, High-street, Kirkcaldy.

Glasgow.—Additions, Polytechnic warehouse, Argyle-street (15,000*l.*); Messrs. Clarke & Bell, architects, 212, St. Vincent-street, Glasgow. Warehouse buildings, Cumberland-street (2,000*l.*); Mr. J. Hamilton, architect, 212, St. Vincent-street, Glasgow.

Glenconnith. — Extension, public school (2,250*l.*); Mr. R. J. McBeth, architect, Queen's House, Inverness.

Golthorpe. — Primitive Methodist church; Mexborough Methodist Trustees.

Greenock.—Extensive alterations to library; Surveyor, Greenock Town Council.

Haselbech.—School; Mr. Lewin, Architect, County Hall, Northampton.

Hatherley (near Gloucester).—School; Mr. R. Phillips, architect, The Cross, Gloucester; Messrs. Marten & Shapcot, builders, Stroud-road, Gloucester.

Heywood.—Additions Railway-station Mills (1,500*l.*); Messrs. Potts & Hennings, architects, Victoria-buildings, Manchester.

Hoole.—Additions, All Saints' Church; the Vicar.

Horsham.—School; Mr. P. Roberts, County Buildings, Horsham.

Hove.—The Town Council has passed the following plans:—Ten pairs semi-detached houses, Erroll-road, for Messrs. Rich & Burbidge. Garage, 32, Wilbury-road, for Messrs. G. Lynn & Son.

Hyde.—Proposed police buildings and municipal offices (13,000*l.*); Mr. J. Mitchell, Surveyor, Hyde Town Council.

Lambton (Co. Durham). — Fifty houses, Lambton Collieries Company, Durham.

Leeds. — Proposed extension of Jewish women's baths, Albert-grove (775*l.*), also firemen's dwellings (1,674*l.*); Mr. W. T. Lancashire, Surveyor Leeds Town Council.

Lewes.—School, St. Anne's; Mr. C. H. Morris, Secretary, Education Committee, Lewes Town Council.

Lincoln.—Children's home, Long Leys-road (1,200*l.*); Mr. C. Fairchild, builder, Burton-road, Lincoln.

Lingfield. — Epileptics' home; Secretary, National Union for Christian Social Service, Lingfield.

Lowestoft. — School; Borough Surveyor, Town Hall, Lowestoft.

Macclesfield.—School, Byron-street (11,530*l.*); Messrs. G. Raylance & Co., Ltd., builders, Waters Green, Macclesfield.

Mearns.—Additions, Balgray House (2,500*l.*); Messrs. Bryden & Robertson, 147, Bath-street, Glasgow.

Melton Mowbray.—Bottling warehouse, etc., at Half Moon Inn, Nottingham-street; the Proprietors.

Middleton.—Dancing-hall, Old Hall-street (1,500*l.*); Mr. R. Steeple, architect, Dunford-street, Middleton.

Mottram.—Church; Vicar of Stalybridge.

Mullingar (Co. Westmeath).—County Hall; Mr. Joyce, County Architect, Mullingar; Messrs. W. G. Scott & Sons, builders, Dublin.

Newton (Montgomery). — Infirmary; Mr. G. A. Hutchins, Architect, County Buildings, Welshpool; Messrs. Treasure & Sons, builders, Chester-street, Shrewsbury.

Newtown. — Medical residence (1,400*l.*); Clerk, Board of Guardians, Rathdown.

North Rigton.—Church; Messrs. Wm. Hill & Sons, architects, 38, Albion-street, Leeds.

Norton (near Stockton-on-Tees).—Wesleyan Methodist Sunday-school, Eden-place; the Trustees.

Nuneaton.—School, Stockingford; Mr. H. Quick, architect, High-street, Nuneaton.

Old Basford.—Elementary school (19,000*l.*); Mr. F. B. Lewis, Architect, The Guildhall, Nottingham.

Oswaldtwistle.—School, Spread Eagle District (4,000*l.*); Mr. R. N. Kunter, Surveyor, Oswaldtwistle Urban District Council.

Plympton St. Mary.—Rebuilding vicarage; Messrs. Tozer & Co., builders, Plymouth.

Portobello.—Mission church, Rosefield-place (840 places); Mr. G. Mackie-Watson, architect, care of The Church of Scotland Home Mission Committee.

Possilpark (near Glasgow).—Boot factory, Saracen-street, for Messrs. Greenlees & Sons (12,000*l.*); Messrs. Wyllie & Blake, architects, 219, St. Vincent-street, Glasgow.

Queensbury (North Wales).—Co-operative shops (3,000*l.*); Mr. J. Harris, architect, Westminster-buildings, Wrexham.

Rawmarsh.—Thirty houses; Mr. J. Tradewell, Peasehill-road, Rawmarsh.

Romford.—Institute; Mr. A. S. R. Lev, architect, 55, Bishopsgate-street, E.C.; Messrs. Dowsing & Davis, builders, Romford.

Ruan. — Parish church (2,000*l.*); Messrs. Keller & McInery, builders, Kilrush.

Salford.—Convenience, Ordsall Park, Trafford-road (738*l.*), and urinals, junction of Chapel-street and Oldfield-road (414*l.*); J. J. Knight, builder, Salford. Plans have been passed for alterations, Bear's Head Inn, 10, Bank-street, Broughton.

Shieldhill.—Cookery and woodwork building, etc., at school (700*l.*); Grangemouth School Board.

Shirebrook. — Theatre, etc., junction of Station and Market streets; Mr. F. Hopkinson, architect, Worksop; Messrs. F. H. & J. W. Moore, builders, Shirebrook.

Skegness.—Congregational church; the Trustees.

Stockton.—Institute for the Grange Estate Association.

Sunderland.—College off Durham-road; Mr. J. W. Moncur, Surveyor, Sunderland Town Council.

Sutton (Surrey).—Completion of Christ Church (2,400*l.*); the Vicar.

Tardebigge.—Institute; Earl of Plymouth.

Tumble (Carmarthenshire). — School; Mr. V. Morgan, architect, Spilman-street, Carmarthen.

Tunbridge Wells. — Fire-station, Calverley Park and Court House; Surveyor, Tunbridge Wells Town Council.

Twynydfaldd.—Thirty houses (160*l.* each), Forest Fach Estate; Mr. J. H. Lewis, Surveyor, Bedwellty Urban District Council.

Wallsend.—Public baths, corner of Vine and Lawson streets (8,000*l.*); Mr. G. Hollings, Surveyor, Wallsend Town Council.

Warrington. — School, Evelyn-street (11,767*l.*); Messrs. J. Dolan & Son, builders, Warrington. Plans have been passed for four houses, Cornwall-street, for Messrs. Webster.

Waterfoot. — Alterations, Bethel Baptist church (1,000*l.*); Trustees.

Watford.—Additions, church cottages, Radlett; Rev. T. Marsden.

Westhoughton. — Council school; Mr. F. Littler, architect, 16, Ribblesdale-place, Preston.

Willington Quay.—Picture hall (1,700*l.*); Mr. J. F. Davidson, Willington Quay; Mr. D. Glen, builder, Jarrow.

*See also our list of Competitions, Contracts, etc., on another page.

GENERAL BUILDING NEWS.

UNITED METHODIST CHURCH, OWLERTON.

The United Methodists of Owlerton are erecting a new church in Penistone-road. The new buildings have been designed by Mr. Teather, of Messrs. Gibbs, Flockton, & Teather, architects; and the tenders of Messrs. Thomas Wilkinson & Sons, and others have been accepted amounting to 3,816*l.* 7s. The existing structure will be renovated and adapted for use as a Sunday-school, and at a later date the old building will be pulled down and a schoolroom erected.

WESLEYAN CHURCH HALL, SKERTON, LANCASTER.

The Wesleyan Methodist community at Lancaster have erected a new church hall at Skerton. The building, designed by Mr. S. Wright, is of local stone, with Darley Dale facings. The accommodation is for 600. One of the principal leaded lights on the west side is occupied by a window commemorating the late Dr. Walter Croft Helme, and this has been designed and executed by Messrs. Shrigley & Hunt. The total cost of the building is 6,500*l.*

COUNCIL SCHOOLS, MEDOMSLEY, DURHAM.

Council schools have been erected by the Durham County Council to meet the requirements of Medomsley and the adjacent colliery villages. The contract has been carried out by Messrs. Clerey & Charlton, builders, Sunderland. The accommodation is for 450 children, arranged in two single-storied blocks, for 300 mixed scholars and 150 infants. The premises have been designed by Mr. J. J. Eltringham, architect, of Blackhill. The gross cost amounted to 5,724*l.*

GIRLS' SECONDARY SCHOOL, BOOTLE.

A new secondary school for girls has been opened at Bootle. The building provides accommodation for 200 girls, and includes, besides the classrooms and the large hall, a laboratory, lecture-room, and art room. The architect is Mr. Hastwell Grayson, M.A., and the builder Mr. T. Spencer, of Aintree. The contractors for the heating were Messrs. Killick & Cochrane.

COUNCIL SCHOOLS, CWMAVON, GLAMORGAN.

The Glamorgan County Council have erected new schools at Cwmavon at a cost of 14,000*l.* The schools have three departments, and the accommodation is for 1,312 scholars. The building is faced externally with cement rough-cast and red brick dressings, and the roofs

GEN. BUILDING NEWS.—*Continued on page 300.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, xvii; Auction Sales, xxiv.

Certain conditions, beyond those given in the following information, are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bonâ-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competitions.

SEPTEMBER 10.—**Folkestone.**—NEW SECONDARY SCHOOL.—The Borough of Folkestone invite designs from architects (being Fellows, Associates, or Licentiates of the R.I.B.A., or members of the Society of Architects) for a new secondary school to accommodate 150 boys. For further particulars see advertisement in our issue of July 30.

SEPTEMBER 15.—**Belfast.**—ADDITIONS TO THE QUEEN'S UNIVERSITY.—The Senate invite designs for the enlargement of the present buildings at a cost of about 52,000*l.* Full particulars, with plan of site, etc., can be obtained on application to Mr. J. M. Finnegan, B.Sc., Secretary, the Queen's University, Belfast, on payment of 2*l.* 2*s.*

SEPTEMBER 19.—**Maesteg.**—ALTERATIONS AND ADDITIONS.—The Maesteg Town Hall Committee invite designs for proposed alterations and additions to the Town Hall and Market Hall. For further particulars see advertisement in our issue of July 23.

OCTOBER 1.—**Antwerp.**—SCHEME FOR LAY-OUT OF SURROUNDINGS AND SITE OF FORTIFICATIONS ABOUT TO BE ABOLISHED.—Three premiums are offered, viz., 1,000*l.*, 400*l.*, and 200*l.* Conditions may be seen at Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C., and obtained from the "Commission d'études de l'aménagement de l'agglomération anversoise," Rue du Jardin des Arbalétriers 57, Antwerp, on payment of 100 francs.

OCTOBER 1.—**Denbigh.**—ERECTION OF A PUBLIC HALL, MARKETS, MUNICIPAL BUILDINGS, ETC.—The T.C. invite competitive plans and designs of a Public Hall, Markets, Municipal Buildings etc., which it is proposed to erect at a cost not to exceed 10,000*l.* Particulars, etc., may be obtained on payment of a deposit of 1*l.* 1*s.* Three premiums are offered, viz., 75*l.*, 30*l.*, and 20*l.*, as first, second, and third respectively. Mr. J. Parry Jones, Town Clerk, Denbigh.

OCTOBER 1.—**Essen.**—Design for a poster for a tin foundry. Prizes of 75*l.* and 50*l.* for the two best designs, and five other prizes of 10*l.* each, are offered by M. Th. Goldschmidt, Director of the "Chemische Fabrik und Zinnhütte" at Essen, Germany.

* OCTOBER 31.—**Romford.**—TOWN PLANNING, ETC.—The Town Planning and Modern House and Cottage Exhibition invite designs for houses, cottages, etc., also town plan of Gidea Park, Squirrels Heath, Romford. See advertisement in this issue for further particulars.

NOVEMBER 15.—**Ruislip-Northwood.**—TOWN PLANNING.—The Directors of Garden Estates, Ltd., invite designs for a town plan of estates of King's College, Cambridge, situated in the urban district of Ruislip and Northwood, Middlesex. Conditions and maps may now be obtained from Mr. Graham Kennedy, Secretary, Garden Estates, Ltd., 33, Henrietta-street, Strand. Deposit 1*l.* 1*s.* See advertisement in our issue of August 27.

NOVEMBER 29.—**Bangor, Co. Down.**—SEA-WATER BATHS.—The Bangor U.D.C. invite designs for baths to be built on the foreshore in conjunction with the existing sea-water pond at Pickie, at a cost of 7,050*l.* Premium 50*l.*, or to be merged into commission of 5 per cent. For further particulars apply to Mr. J. Milliken, Clerk to the Council, and see advertisement in issue of August 20.

DECEMBER 1.—**Dublin.**—New pavilion to the Royal Hospital for Incurables at Donnybrook. Open only to architects practising in Dublin. Premia 100*l.* (to be merged), 30*l.*, and 20*l.* Conditions on application to the Registrar.

NOVEMBER 1, 1911.—**City of St. Petersburg.**—MONUMENT TO ALEXANDER II.—Particulars in our issue of August 13, 1910.

NO DATE.—**Llandudno.**—CHURCH.—Open to architects who have been in practice five years in North Wales and Chester. Conditions (1*l.* 1*s.* deposit, returnable if conditions are sent back in fourteen days) from the Rector, Llandudno. For further particulars see advertisement in our issue for September 3.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

SEPTEMBER 10.—**Epping.**—PROPOSED CEMETERY.—The U.D.C. invite tenders for (1) the laying out of proposed new cemetery; also (2) the erection of gates and fences; (3) the building of chapel and tool-shed. Quantities will not be supplied, but each contractor will be given a copy of the plans and specifications on deposit of 5*s.*, which should accompany the application to tender, which must be made on or before the 10th inst. to Mr. G. J. Creed, Clerk of the Council, Epping.

SEPTEMBER 10.—**Nelson, Glam.**—POLICE-STATION.—The Standing Joint Committee of the Glamorgan Quarter Sessions and C.C. invite tenders for the erection of a new police-station. Plans, etc., can be seen, and quantities obtained at the County Police-station, Bargoed, and at the offices of Mr. T. Mansel Franklen, Clerk of the C.C., Glamorgan C.C. Offices, Westgate-street, Cardiff.

SEPTEMBER 12.—**Carlisle.**—URINALS, ETC.—The Guardians invite tenders for new urinals, lavatories, and water-closets in yards at Harraby Hill House. Particulars of the work may be obtained at the offices of Mr. Geo. Armstrong, architect, 24, Bank-street, Carlisle.

SEPTEMBER 12.—**Ferring and Durrington.**—WALL AND DRAIN.—East Preston R.D.C. invite tenders for building a wall at "The Clappers," Ferring. Also for laying a storm-water drain at Durrington-lane, Durrington. Specifications to be obtained on application to Mr. Arthur Shelley, Clerk to the Council, Littlehampton.

SEPTEMBER 12.—**Harrogate.**—ADDITION TO FIRE-STATION.—The Corporation invite tenders for a small addition to the fire-station. Particulars may be obtained (by appointment) at the office of Mr. F. Bagshaw, Borough Engineer and Surveyor.

SEPTEMBER 12-21.—**Leeds.**—TRAINING COLLEGE BLOCK.—Erection of educational block at the City of Leeds Training College, Beckett's Park, Headingley (contract No. 2). Names, on or before the 12th inst., together with a deposit of 2*l.* 2*s.*, to Mr. James Graham, Secretary for Education, Education Department, Calverley-street, Leeds.

SEPTEMBER 12.—**Mossley.**—DRILL-HALL.—Proposed new drill-hall, Manchester-road, Mossley, for the West Riding of Yorkshire County Association. Plans may be seen, and quantities obtained, at offices of Mr. W. Cooper, F.R.I.B.A., architect, 4, Kirkgate-buildings, Huddersfield.

SEPTEMBER 12.—**Portsmouth.**—ALTERATIONS, ETC.—The Corporation invite tenders for constructing (1) a waiting-room and bicycle store at the north-east entrance of the Town Hall; and (2) alterations and additions to the Borough Engineer's offices at the Town Hall. Specifications, etc., may be seen, and a form of tender for each of the above works obtained, at Borough Engineer's office, Town Hall.

SEPTEMBER 13.—**Barras Cross, Liskeard.**—DWELLING-HOUSE.—For the erection of a dwelling-house, for Mr. Edward Hicks. Plans, etc., can be seen at the office of Mr. John Sansom, F.R.I.B.A., architect, Liskeard.

SEPTEMBER 13.—**Blaengarw.**—EXTENSIONS.—Proposed extensions to Co-operative Stores, Blaengarw. Plans, etc., to be seen at the Stores. Mr. D. P. Jones, Secretary.

SEPTEMBER 14.—**Manchester.**—URINALS.—The Sanitary Committee invite tenders for the construction of two public urinals adjoining the Didsbury Hotel, Wilmslow-road, Didsbury, and the Coach and Horses Hotel, Stockport-road, Longsight. Drawings may be seen, and specification, etc., obtained, on application at the City Surveyor's office, Town Hall Manchester, and on payment to the City Treasurer of 1*l.* 1*s.*

SEPTEMBER 14.—**Selkirk.**—SCHOOL ADDITIONS, ETC.—The School Board of the Burgh of Selkirk invite separate offers for the various works required in carrying out additions to and alterations on Knowepark and the Senior Burgh Schools. Plans, etc., may be seen at the office of the architects, Messrs. J. & J. Hall, Galashiels, from whom quantities may also be obtained.

SEPTEMBER 14.—**Stanley, Derby.**—CLASSROOM.—The Managers of Stanley Church Schools invite tenders for erecting classroom. For plans and particulars apply to Messrs. Heazell & Sons, architects, Nottingham.

* SEPTEMBER 15.—**Leytonstone.**—SORTING OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for sorting office at Leytonstone. See advertisement in this issue for further particulars.

* SEPTEMBER 15.—**Tamworth.**—HANDICRAFT CENTRE.—The Staffordshire Education Committee invite tenders for handicraft centre on site of boys' Council school at Tamworth. See advertisement in this issue for further particulars.

SEPTEMBER 16.—**Ebbw Vale.**—SCHOOL ADDITIONS.—The Education Committee invite tenders for the erection of a domestic science and manual instruction centre at Willowtown Schools. Plans, etc., may be seen, and quantities obtained, on deposit of 2*l.* 2*s.*, on application to the Committee's Architect, Mr. Hy. Waters, M.S.A., Market-chambers, Ebbw Vale.

SEPTEMBER 16.—**Rhondda.**—SCHOOL EXTENSIONS.—The U.D.C. invite tenders for the carrying out of (1) extensions at Ynyshir Council School (girls' department); (2) extensions at Tonypandy Council School (infants' department). Plans, etc., may be seen, and quantities, etc., obtained, at the office of the architect, Mr. Jacob Rees, Hillside Cottage, Pentre, upon production of a receipt from the Accountant of the Council for deposit of 1*l.* 1*s.* in respect of each work.

SEPTEMBER 16.—**Springhead.**—SCHOOL WORKS.—The West Riding Education Committee invite whole or separate tenders for builder, plumber, asphalter, and general repair work to be done at Springhead Council School. Specifications, etc., may be obtained on application to the Education Architect, County Hall, Wakefield. A sum of 1*l.* must be sent by separate letter to the West Riding Treasurer, County Hall, Wakefield.

SEPTEMBER 16.—**Tredegar.**—ALTERATIONS AND ADDITIONS.—Alterations and additions to Tredegar House, Tredegar, for the Tredegar Billiard and Recreation Company. Plans and specification may be seen at the offices of Mr. T. Edmund Rees, architect and surveyor, The Walk, Merthyr Tydfil.

SEPTEMBER 19.—**Annfield Plain.**—PICTURE THEATRE.—For the erection of a picture theatre. Plans, etc. (no quantities), may be seen at Mr. L. H. Armour's office, 16, West-street, Gateshead.

SEPTEMBER 19.—**Monmouthshire.**—SCHOOL ALTERATIONS.—Monmouthshire Education Committee invite tenders for extensions and alterations to the Pantygasseg Council School, near Pontypool; also for extensions and alterations to the Pengam Council School, Pengam (Mon.). Plans, etc., may be seen, and quantities obtained, at the office of Mr. John Bain F.R.I.B.A., C.C. Offices, Newport, on deposit of 1*l.* 1*s.* by cheque in respect of each school, made payable to the Monmouthshire Education Committee.

SEPTEMBER 19.—**Roscommon.**—POST-OFFICE.—The Board of Public Works invite tenders for the erection of a new Crown post-office at Roscommon. The plans, etc., can be seen at the Post-office, Roscommon, and at office of Mr. H. Williams, Secretary, Office of Public Works, Dublin. Forms of tender, etc., will be supplied on deposit of 1*l.*

SEPTEMBER 20.—**Bangour Village.**—COTTAGES.—Edinburgh District Board of Lunacy invite offers for the erection of four cottages for farm servants and four cottages for attendants at Bangour Village, Upball. Schedules may be obtained on application to Mr. James Kyd, Clerk, Chambers, Castle-terrace, Edinburgh, and plans, etc., may be seen at the office of Messrs. Peter Lawrence & Co., surveyors, 50A, Frederick-street.

SEPTEMBER 20.—**Durham.**—COUNCIL SCHOOLS, ETC.—The Durham C.C. invite sole tenders for new Council schools at Mount Pleasant, Spennymoor, and Close House (near Bishop Auckland), manual instruction room at Ryhope, and alterations at Broompark Council school. Plans, etc., may be seen, and quantities obtained, as follows:—(1) Mount Pleasant, Mr. W. Rushworth Shire Hall, Durham; (2) Close House, Ryhope, and Broompark, Mr. N. Richley, Shire Hall, Durham.

* SEPTEMBER 20.—**Isleworth, W.**—ALTERATIONS.—The Brentford Guardians invite tenders for alterations and additions to laundry at Workhouse, Isleworth, W. See advertisement in this issue for further particulars.

SEPTEMBER 20.—**Ockford, near Godalming.**—PUMPING-STATION BUILDINGS.—Tenders are invited for the erection of new pumping-station buildings. Specification, etc., may be seen, and quantities obtained, on deposit of 1*l.* 1*s.*, at the office of Mr. J. H. Norris, Borough Surveyor and Water Engineer, Municipal-buildings, Godalming.

* SEPTEMBER 21.—**Chiswick.**—STABLES.—The Chiswick U.D.C. invite tenders for erection of stables at River Depôt, Corney Reach, Chiswick. See advertisement in this issue for further particulars.

SEPTEMBER 21.—**Newtown, Wigan.**—COUNCIL SCHOOL.—The Education Department invite tenders from builders carrying on business in the County Borough of Wigan for the erection of the new Council elementary school, Scot-lane. Drawings may be seen at the office of the Architect, Mr. H. D. Holland, 11, Library-street, Wigan, and quantities obtained there on deposit of 1*l.*

SEPTEMBER 23.—**Dublin.**—FIRE-STATION.—The Waterworks Committee invite tenders for the erection of a new fire brigade station, Thomas-street, in accordance with the plans, specifications, and conditions of contract prepared by the City Architect, which may be inspected at his office, Municipal-buildings, Cork-hill, Dublin. Quantities, etc., may be obtained at the office of the City Treasurer, Municipal-buildings, Cork-hill, Dublin, on payment of 2*l.*

SEPTEMBER 23.—**Maltby.**—NEW SCHOOL.—The West Riding Education Committee invite whole or separate tenders for Maltby new school. Plans may be seen, and specifications, etc., obtained, on application to the Education Architect, County Hall, Wakefield. A sum of 1*l.* in each case must be sent by separate letter to the West Riding Treasurer, County Hall, Wakefield.

OCTOBER 4.—**Southall.**—BOILER-HOUSE, HEATING AND PAVING.—Southall-Norwood U.D.C. invite tenders for (*a*) boiler-house; (*b*) hot-water heating; (*c*) hot-water supply, at the sanatorium; and (*d*) paving works; and (*e*) channelling work. Specification, etc., may be seen, and forms obtained, at the office of Mr. Reginald Brown, A.M.Inst.C.E., P.A.I., etc., Engineer and Surveyor to the Council, Public Offices, Southall.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

OCTOBER 18.—**Ammanford.**—CHURCH.—Erection of a new church. Full particulars, together with quantities, may be obtained from Mr. W. D. Jenkins, F.S.I., A.R.I.B.A., architect, Llandilo.

No DATE.—**Duns.**—ALTERATIONS TO SCHOOL.—Estimates are wanted by the School Board of Duns for carrying out alterations, etc., to the Berwickshire High School. Schedule for estimates may be obtained from the Clerk to the School Board, 12, Newton-street, Duns, on payment of a fee of 10s. 6d., and plans may be seen at the School Board Office, Duns, or at the offices of the architects, Messrs. R. A. Bryden & Robertson, 147, Bath-street, Glasgow.

No DATE.—**Durham.**—ELECTRIC THEATRE.—New Electric Theatre, Claypath, Durham City. Names to Messrs. Henry Gibson and P. J. Stienlet, architects, 56, Camden-street, North Shields, where plans may be seen, and quantities obtained, on deposit of 1*l.* 1s.

ENGINEERING, IRON, AND STEEL.

SEPTEMBER 12.—**High Wycombe.**—IRON FENCING.—Tenders are invited for iron spiked fencing to be erected on the side of Loakes Park, High Wycombe. Mr. B. C. Hooper, Secretary, Wycombe Wanderers F.C., 135, Hughenden-road, High Wycombe.

SEPTEMBER 12.—**Longdendale, Manchester.**—ELECTRIC CRANE.—The Waterworks Committee invite tenders for the supply and delivery at Longdendale of an electric derrick crane. Specification and form of tender may be obtained on application to the Secretary, Waterworks Offices, Town Hall, Manchester.

SEPTEMBER 13.—**India.**—BRIDGEWORK.—The South Indian Railway Company, Ltd., invite tenders for bridgework, 434 tons. Specifications and forms of tender may be obtained at the company's offices, on payment of 20s. for each copy. Drawings may be obtained at the office of Mr. Robert White, M.Inst.C.E., Consulting Engineer to the Company, 3, Victoria-street, Westminster on payment of 5s. per sheet. Mr Neville Priestley, Managing Director, Company's Offices, 91, York-street, Westminster.

SEPTEMBER 13.—**Littleborough.**—ELECTRICITY METERS.—The U.D.C. invite tenders for the supply and delivery of alternating current (single and three phase) electricity meters. Specification, etc., may be obtained, on depositing a cheque for 2*l.* 2s., from Mr. George H. Wild, Clerk to the Council, Council Offices, Littleborough, near Manchester. Specifications may be seen, but not obtained, at the office of Messrs. Hawtayne & Zeden, 9, Queen-street-place, London, E.C., consulting engineers to the Council.

SEPTEMBER 16.—**Belfast.**—GAS METERS AND STOVES.—Tenders are invited for the supply of dry meters (ordinary and prepayment); also gas cookers, heating stoves, etc. Conditions and forms of tender may be had on application to the Engineer and Manager, Gasworks.

SEPTEMBER 16.—**Treherbert.**—HEATING.—Rhondda U.D.C. invite tenders for the provision and installation of heating apparatus on the low-pressure hot-water system at the girls' and infants' departments of the Penyrenglyn Council School. Particulars etc., may be obtained upon application to Mr. Jacob Rees, architect, Hillside Cottage, Pentre, at which address the design may also be seen.

SEPTEMBER 19.—**Dublin.**—STEAM ROAD ROLLER AND SCARIFIER.—The Paving Committee invite tenders for the supply of a 12½-ton steam road roller, with scarifier. Further particulars and form of tender and necessary documents can be obtained at the office of Mr. John G. O'Sullivan, Borough Surveyor.

SEPTEMBER 19.—**Whitechapel, E.**—WATER-SOFTENING APPARATUS.—The Guardians invite tenders for the supply and fixing of a water-softening apparatus at the Infirmary, Vallance-road, N.E. Full particulars can be obtained on application to the Steward of the Infirmary. Specification and form of tender can be had at the office of the Clerk to the Guardians, 74, Vallance-road, N.E.

MISCELLANEOUS.

SEPTEMBER 12.—**East Preston.**—CARTING.—The R.D.C. invite tenders for the cartage of road material. Mr. Arthur Shelley, Clerk to the Council, Littlehampton.

SEPTEMBER 12.—**East Preston.**—STEAM ROLLING.—The R.D.C. invite tenders for steam rolling. Tenders, stating weight of roller and other particulars, with price per day inclusive, to be sent to the Chairman of the Rural District Council, Boardroom, East Preston.

SEPTEMBER 13.—**Anniesland, N.B.**—CLEARING AND EXCAVATING.—For clearing and excavating ground at Anniesland. Plan, etc., may be seen, and specification, etc., obtained, on depositing 10s. 6d., from Mr. Gilbert Thomson, C.E., 164, Bath-street, Glasgow.

SEPTEMBER 13.—**Blaydon-on-Tyne.**—SCAVENGING.—The U.D.C. invite tenders for the removal and disposal of contents of ashpits, etc., at Victoria Gares-field. Full particulars may be obtained from Mr. Robert Biggins at the offices of the Council, Blaydon-on-Tyne, between 9 and 10 a.m.

SEPTEMBER 15.—**Linlithgow.**—POND.—Linlithgow United Curling Club invite specifications and tenders for the formation of curling pond of two rinks at Linlithgow. Particulars from Mr. W. M. Scott, architect, Linlithgow.

SEPTEMBER 17.—**Blandford.**—STEAM ROLLING.—The R.D.C. invite tenders for the work of steam rolling the district roads. For forms of tender and other particulars apply to Mr. Edward Phelps, District Surveyor, Blandford.

SEPTEMBER 19.—**Bristol.**—HAULING.—The Sanitary and Improvement Committee invite tenders for the hire of horses, harness carts, and men for general hauling. Specifications, etc., may be obtained, on payment of 10s., from Mr. Thos. Henry Yabbicom, M.Inst.C.E., City Engineer and Surveyor, 65, Queen-square.

SEPTEMBER 23.—**North Walsham.**—STEAM ROLLING, ETC.—The U.D.C. invite tenders for the supply of a 10-ton steam road roller, with scarifier, for a period of from forty to fifty working days. Mr. J. S. Empson, Clerk to the Council, North Walsham.

SEPTEMBER 24.—**Derby.**—FURNISHING ASYLUM.—The Committee of Visitors of the Derby Borough Asylum invite tenders for ward furniture. Forms of tender and all particulars may be obtained upon application at the Asylum.

No DATE.—**Holbeck.**—STRIPPING AND RESLATING.—For stripping and reslating nine houses, 12 to 14 Bowling Green-terrace, Holbeck. Mr. Rhodes, Albion Walk-chambers, Leeds.

PAINTING, etc.

SEPTEMBER 12.—**Leeds.**—PAINTING.—The Highways Committee invite tenders for the painting of the Highways Offices, 155, Kirkstall-road. Specifications may be seen, and forms and full particulars obtained, on application at the Highways Office, 155, Kirkstall-road, Leeds.

SEPTEMBER 12.—**Llanbradach.**—PAINTING.—For painting thirty-one houses for the Llanbradach Building Club. Specification at Mr. L. C. Oatley's, Hairdresser, Llandradach.

SEPTEMBER 12.—**Rothwell Haigh.**—PAINTING, ETC.—Hunslet Guardians invite tenders for painting and lime and colour washing required at their Children's Homes. Forms, etc., may be obtained on application at office of Mr. Fred W. Mee, Clerk to the Guardians, Union Offices, Hunslet, Leeds.

SEPTEMBER 14.—**Coxheath.**—PAINTING, ETC.—The Guardians of the Maidstone Union invite tenders for painting at the Workhouse and schools, Coxheath, and repairing guttering, according to specification, which may be inspected at the Workhouse Master's Office.

SEPTEMBER 14.—**Exeter.**—PAINTING, ETC.—The Guardians invite tenders for certain general reparation, painting, etc., to the Workhouse. Specifications may be seen, and full particulars obtained, at the office of their Architect, Mr. R. M. Challice, 14, Bedford-circus, Exeter.

SEPTEMBER 14.—**Harrogate.**—PAINTING.—The Committee of Management of the Royal Bath Hospital and Rawson Convalescent Home invite tenders for the painting of the wood and iron work on the outside of these institutions. Specifications may be seen daily from 1 to 4 p.m. at the Hospital.

SEPTEMBER 14.—**Liverpool.**—PAINTING.—The Select Vestry invite tenders for painting the interior of the receiving hall, staircase, and dining hall at the Workhouse, Brownlow-hill. Specifications may be seen at the office of Mr H. J. Hagger, Vestry Clerk, Parish Offices, Brownlow-hill.

SEPTEMBER 14.—**Stoke-upon-Trent.**—PAINTING, ETC.—The Guardians invite tenders for painting, etc., at the Cottage Homes, in accordance with specification prepared by Mr. A. R. P. Piercy, Architect to the Guardians, from whom particulars may be obtained.

SEPTEMBER 15.—**Prescot.**—PAINTING, ETC.—The Guardians invite tenders for cleaning, painting, and papering the Nurses' Home buildings at the Workhouse. Specifications can be obtained at the office of Mr. Jas. Gandy, Masonic-buildings, St. Helens, on a deposit of 10s. (no cheques).

SEPTEMBER 15.—**Ystrad Rhondda.**—PAINTING.—For painting, etc., at the Commercial Inn. Specifications may be seen at the office of Mr. W. D. Morgan, M.S.A., architect, 194, Ystrad-road, Pentre.

SEPTEMBER 19.—**Dublin, etc.**—PAINTING.—The Directors of the Great Northern Railway Company (Ireland) invite tenders for the cleaning and painting of six station between Dublin and Drogheda. Particulars and forms may be obtained from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin, or at his office at Belfast.

SEPTEMBER 19.—**Ottershaw, Chertsey.**—PAINTING, ETC.—The Joint Committee of Management of the Isolation Hospital, Ottershaw, Chertsey, invite tenders for painting at the hospital. Specification may be obtained on application to Mr. H. E. Paine, Clerk to the said Committee, 80, Guildford-street, Chertsey.

✱ SEPTEMBER 27.—**Leytonstone.**—PAINTING.—The Leyton U.D.C. invite tenders for painting the exterior of the electric light and power station, Cuthall-road, Leytonstone. See advertisement in this issue for further particulars.

SEPTEMBER 28.—**Woolwich.**—CLEANING, PAINTING, AND REPAIRS.—The B.C. invite tenders for cleaning, painting, and other work at the Public Library, High-street, Plumstead. Specification, etc., may be obtained at the office of Mr. J. Rush Dixon, M.Inst.C.E., Borough Engineer, Town Hall, Woolwich.

No DATE.—**Leeds.**—PAINTING.—For painting twelve cottages. Particulars, etc., Mr. Allison, Knostrop, Leeds.

ROADS, SANITARY, AND WATER WORKS.

SEPTEMBER 12.—**Blackburn.**—STREET WORKS AND RETAINING WALL.—The Highway Committee invite tenders for excavating, forming, and macadamising Mile End-row, etc.; also for the erection of a retaining wall in Church Hill-road. Plans, etc., may be seen and all information obtained, upon application at the office of Mr. William Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

SEPTEMBER 12.—**Bolsover.**—MAKING-UP.—The U.D.C. invite tenders for the making-up of Charlesworth-street, Carr Vale. Plans, etc., may be seen, and specifications, etc., obtained, by appointment with Mr. W. G. H. Browne, Surveyor to the Council, Council Offices, Bolsover.

SEPTEMBER 12.—**Derby.**—COMPLETION OF PRIVATE STREETS.—The Corporation invite tenders from local contractors for making up and completing Park-grove (part), Stanley-street (part), and Overdale-road (part). Plans, etc., may be seen, and quantities and any further particulars obtained, upon application at the office of Mr. John Ward, M.Inst.C.E., Borough Surveyor, Borough Surveyor's Office, Babington-lane, Derby.

SEPTEMBER 12.—**Glasgow.**—CONCRETE PAVING.—The Corporation invite offers to provide and lay with cement concrete paving that portion of the footpath opposite the ground belonging to the Corporation sewage department at Clydebank. Specifications, etc., may be had on application at the Office of Public Works, 64, Cochrane-street.

SEPTEMBER 12.—**Hipperholme.**—PIPE SEWER.—The U.D.C. invite tenders for the whole of the work involved in the construction of about 440 yds. of 9-in. pipe sewer, from Syke Wells to Priestley Green. Drawings, etc., may be seen, and quantities, etc., obtained, at the office of Mr. G Wharton Thompson, Engineer and Surveyor to the Council, Council Offices, Hipperholme.

SEPTEMBER 12.—**Leeds.**—STREET WORKS.—The Highways Committee invite tenders for the paving and flagging of the following private streets:—Hill Top-place, Lunan-terrace, Back Lunan-terrace, Lunan-place, and Back Lunan-place. Drawings may be seen at the City Engineer's Office, Municipal-buildings. Tenders are also invited for the paving and flagging at The Gang, Armley, and Manor-street, Leeds, the re-paving of Basinghall-street, also for the paving of the sides of Stanningley-road (parts). Forms and quantities may be obtained on application at the Highways Office, 155, Kirkstall-road, Leeds.

SEPTEMBER 12.—**Lenham.**—FOOTPATH.—The P.C. invite tenders for a new tar footpath in the cemetery. Specifications can be seen at the office of Mr. F. Day, Clerk, Lenham.

SEPTEMBER 13.—**Bushey.**—PRIVATE STREET WORKS.—The U.D.C. invite tenders for making-up Belmont-road (Part I)) and Greatham-road. Plans, etc., may be inspected between 10 a.m. and 12 noon, and quantities, etc., obtained, on application to Mr. Ernest E. Ryder, Surveyor, at the Council Offices, on payment of 2*l.* 2s.

SEPTEMBER 14.—**Congleton.**—SEWAGE DISPOSAL WORKS.—The R.D.C. invite tenders for the construction of the Malkins Bank sewage disposal works. Drawings, etc., can be seen, and quantities with form obtained, on application at office of Mr. H. Ferrand, Clerk to the Council, Sandbach, Cheshire.

SEPTEMBER 14.—**Elham.**—WORKHOUSE DRAINAGE.—The Guardians invite tenders for work required in connexion with the laying of a new drain, constructing of manholes, etc., at the Workhouse. Plans, etc., may be seen at the offices of the Engineer, Mr A. Robert Bowles, A.M.Inst.C.E., 104, Sandgate-road, Folkestone, and quantities obtained upon payment of 10s. 6d.

SEPTEMBER 15.—**Greenwich.**—PAVING.—The B.C. invite tenders for paving portion of Ransom-road. Plan, etc., can be seen, and further particulars obtained, at the Borough Engineer and Surveyor's Office, Town Hall, Greenwich-road, S.E.

SEPTEMBER 19.—**Lanark.**—WATER WORKS.—The T.C. invite tenders for carrying out the Lochlyock extension (contract No. 5), consisting of storage reservoir, filter-beds, etc. Specification, etc., may be obtained at the office of the Engineer, Mr. M Ratcliffe Barnett, M.Inst.C.E., 124, St. Vincent-street, Glasgow, on payment of 1*l.* 1s.

SEPTEMBER 20.—**Belfast.**—SEWER.—The Improvement Committee invite tenders for the construction of earthenware pipe sewer in King's-road, together with manholes, etc. Drawings, etc., can be been, and particulars obtained, at the office of the City Surveyor.

✱ SEPTEMBER 20.—**Willesden.**—WOOD PAVING.—The Willesden D.C. invite tenders for relaying wood paving in Willesden-lane, Edgware-road, and other roads. See advertisement in this issue for further particulars.

SEPTEMBER 22.—**Wallington, Surrey.**—MAKING-UP, ETC.—Croydon R.D.C. invite tenders for making-up and laying granite sett paving in Danbury-mews, Wallington. Plans, etc., prepared by the Council's Surveyor, Mr. R. M. Chart, F.S.I., can be inspected, and form of tender obtained, at his office, Katharine-street, Croydon, on and after September 12, on payment of 1*l.*

SEPTEMBER 24.—**Birmingham.**—FOUL-WATER SEWERS.—The Public Works Committee invite tenders for the construction of about 2¾ miles of 9-in. to 15-in stoneware pipe sewers, together with manholes, in the Quinton area of the city. Plans, etc., may be seen, and quantities and forms obtained, on the deposit of 2*l.*, at the office of Mr. Henry E. Stilgoe, City Engineer and Surveyor, the Council House, Birmingham.

SEPTEMBER 24.—**Conway.**—PRIVATE STREET WORKS.—The Corporation invite tenders for the excavation, provision, and laying of about 1,700 yds. of 9-in. stoneware pipe sewer, together with manholes, etc., in Albert-drive and Victoria-drive. Drawings may be seen, and specification, etc., obtained, upon deposit of 1*l.* 1s., at the office of Mr. F. A. Delamotte, Borough Engineer and Surveyor.

SEPTEMBER 24.—**Hornchurch, Essex.**—SEWERAGE.—The Romford R.D.C. invite tenders for carrying out the Abbs Cross-road sewerage works. Specification, etc., may be inspected at the office of Mr. William Fairley, civil engineer 69, Victoria-street, Westminster, and quantities obtained on producing receipt for cheque for 2*l.* 2s., made payable to the Council, and deposited with the Clerk, Mr. William Smith, 13, North-street, Romford.

SEPTEMBER 24.—**Stetchworth, Cambs.**—PIPE SEWER, FILTRATION TANKS, ETC.—Newmarket R.D.C. invite tenders for the construction of a 9-in. pipe sewer, settling and filtration tanks, and sub-irrigation pipes, at Stetchworth, Cambs. Plans, etc., can be seen at the office of Mr. John Brown, Surveyor to the Council, Burwell, Cambs.

SEPTEMBER 27.—**Barking.**—PRIVATE STREET WORKS.—The U.D.C. invite tenders for the execution of private street works at Gordon-road and Salisbury-avenue. Plans, etc., may be seen, and specification, etc., obtained from Mr. C. F. Dawson, Surveyor to the Council, Public Offices, Barking, on and after the 12th inst.

SEPTEMBER 27.—**Barking.**—ROAD WIDENING.—The U.D.C. invite tenders for Movers-lane widening (first portion). Plans and details can be seen, and specification, etc., obtained, upon application to Mr. C. F. Dawson, Surveyor to the Council, Public Offices, Barking, on and after the 12th inst.

ROADS, etc.—continued.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

OCTOBER 4.—**Bocking, Essex.**—WELL-BORING.—Braintree R.D.C. invite tenders for sinking a bore-hole and test pumping. Specifications may be obtained from the engineers, Messrs. Sands & Walker, Milton-chambers, Nottingham.

NO DATE.—**Cardigan.**—SCHOOL DRAINAGE AND PAINTING.—The County Education Committee invites estimates for carrying out the following, viz.: Llangwyryfon Council School (water supply and drainage); Cofadail Council School (painting school-house) Full particulars can be obtained from Mr. Geo. Dickens-Lewis, County Architect, Aberystwyth.

STONES, MATERIAL, AND STORES.

SEPTEMBER 12.—**Gosforth.**—STORES.—The Committee of Visitors of the Newcastle-upon-Tyne Lunatic Asylum, Gosforth, invite tenders for the supply of earthenware, paint, oils, varnish, and timber. Forms of tender may be had on application to the Clerk of the Asylum.

SEPTEMBER 13. — **Edmonton.** — GRANITE. — The U.D.C. invite tenders for the supply of blue Guernsey and Aberdeen granite. Forms of tender and full particulars may be obtained at the Council's Offices, Town Hall, Edmonton.

SEPTEMBER 13.—**Edmonton.**—STONEWARE PIPES.—The U.D.C. invite tenders for the supply and delivery of stoneware pipes Forms of tender and full particulars may be obtained on application at the Council's Offices Town Hall, Edmonton.

SEPTEMBER 13.—**Plymouth.**—MATERIALS.—The Guardians invite tenders for the supply of builders' materials, etc. Forms of tender may be had on application at the offices of Mr. W. H. Davy, Clerk to the Guardians, Clerk's Offices, Greenbank-road, Plymouth.

SEPTEMBER 13. — **Shoeburyness.**—GRANITE.—The U.D.C. invite tenders for the supply of about 200 tons of 1½-in. broken granite. Mr. Frederic Gregson, Clerk, 46, Alexandra-street, Southend-on-Sea.

SEPTEMBER 15.—**West Ham.**—GRANITE SPALLS.—The Guardians invite tenders for the supply of 500 tons of blue Guernsey granite spalls. Forms may be obtained on application, or will be forwarded on receipt of a stamped addressed foolscap envelope. Mr. Thomas Smith, Clerk, Clerk's Office, Board-room, Union-road, Leytonstone, N.E.

SEPTEMBER 17.—**Chorley.**—PAVING MATERIALS, ETC.—The Corporation invite tenders for the supply of paving materials, broken granite, glazed earthenware pipes, etc. Specification and form may be obtained on application to Mr. Wm. Leigh, Borough Surveyor, Town Hall.

SEPTEMBER 17.—**Devonport.**—CEMENT.—The Water Committee invite tenders for the supply of 2,000 tons (more or less) of best English Portland cement. Particulars, with specification and form of tender, may be obtained from Mr. Frederick W. Lillicrap, Water Engineer, Municipal Offices, Devonport.

SEPTEMBER 19.—**Liverpool.**—STORES.—The Select Vestry invite tenders for supplying various stores. Form to be obtained on application at the Parish Offices, Brownlow-hill, Liverpool.

SEPTEMBER 19 — **London.** — IRONMONGERY.—The Guardians of the City of London Union invite tenders for the supply of ironmongery. Further particulars will be stated on the tender papers, which may be obtained at the Union Offices, 61, Bartholomew-close, E.C.

SEPTEMBER 21.—**Romford.**—GRANITE.—The U.D.C. invite tenders for the supply of blue Guernsey granite, hand broken. Forms of tender can be obtained on application to either Mr. J. Turvey, the Surveyor, or Mr. Charles T. King, Clerk, at the Council Offices, Romford.

SEPTEMBER 27.—**Glasgow.**—GAS DEPARTMENT STORES.—The Corporation invite tenders for supplying materials to the gas department, also for carting. Specifications, etc., may be obtained, and samples examined, on application to Mr Alex. Wilson, Gas Engineer, 45, John-street, Glasgow.

SEPTEMBER 27. — **Woking.**—ROAD MATERIAL.—The U.D.C. invite tenders for the supply of about 2,000 tons of granite Forms of tender may be obtained from Mr. G. J. Wooldridge, Surveyor, Council Offices, Woking.

Public Appointment

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*ASSISTANT INSTRUCTORS (JOINERY & METAL WORK).	L.C.C.	See advertisement in this issue	Sept. 17

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*BRICKMAKING PLANT, ETC., BARNET.—On the Premises	Charles Sparrow & Son	Sept. 12
*DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	Sept. 14
*BUILDER & DECORATOR'S PLANT, KINGSLAND, N.E.—On the Premises	H. W. Smith	Sept. 15
*FREEHOLD BUILDING ESTATE.—At the White Hart Hotel, Brentwood	B. Bond & Sons	Sept. 22
*STOCK OF TILES, WORCESTER.—On the Premises	Henry Coombs	Sept. 22
*STOCK OF PAPERHANGINGS.—3, REDCROSS-STREET, E.C.—On the Premises	Fryer, Cooper, & Co.	Sept. 22
*FREEHOLD PROPERTY, LIVERPOOL.—At the Mart	Edwin Fox, Bousfield, Burnett, and Baddeley	Oct. 5

GEN. BUILDING NEWS—*Continued from page 297.*

are covered with Portmadoc slates. The cloakrooms and entrances have floors of granolithic concrete, and all the other floors are laid with pitchpine wood blocks. The heating is by low-pressure hot-water systems, installed by Mr. J. E. Hiles, of Hereford, but fireplaces are provided in case of emergency. The contractors were Messrs. Waring, Cole, & Waring, Neath, and Mr. J. T. Morgan acted as clerk of the works. The school was designed and erected under the superintendence of Mr. W. James Nash, A.R.I.B.A., County Education Architect.

CONVENT, CASTLEBLAYNEY.

The foundation-stone was recently laid of a new convent for the Sisters of Mercy in Castleblayney. The erection of the building will be carried out by Mr. Ritchie, contractor, Belfast, from the designs and under the direction of Mr. J. J. McDonnell, Belfast, and it is estimated that the cost of the convent and the proposed new schools will amount to about 8,000*l.*

WOMEN'S LODGING-HOUSE, MANCHESTER.

A municipal lodging-house for women, to be known as Ashton House, has been opened in Corporation-street, Manchester. The cost has been about 11,000*l.*, apart from furnishing. On the ground-floor are a large inner hall with permanent seats, a dining-hall, and a recreation hall. The main staircase leads from the inner hall to the cubicles on the upper floors. Each of the three upper floors contains seventy-four cubicles, or a total of 222 beds, each cubicle being not less than 7 ft. 6 in. by 5 ft. in area. Panic staircases are provided in suitable positions. The buildings have been erected by Mr. R. Carlyle, of Old Trafford, from the designs of Mr. H. Price, the City Architect.

TRADE NEWS.

Messrs. J. C. Spooner & Sons, of 32, Jewry-street, Aldgate, request us to notify our readers that they are in no way connected with the recently established firm of Messrs. Spooner & Smith.

The "Shark" Grip Tiling Company (1910), Ltd., inform us that they have purchased the entire goodwill and assets of the "Shark" Grip Opal Tiling Company, Ltd., and have opened new offices and showrooms at No. 69, Newman-street, W. They retain the service of the old staff under the general management of Mr. A. Attride, and are completing the several large contracts undertaken by the old company.

MISCELLANEOUS.

ORDNANCE SURVEY.

The report for the twelve months ended March 31 last has just been issued. The revision of the large-scale maps—25 in. to a mile and 6 in. to a mile—is maintained as a constant work, so that no area of Great Britain is left unrevised for a period exceeding twenty years. The resurvey of Ireland upon the larger scales is in rapid progress—in 1909-10 nearly 905,000 acres, including 5,120 acres of Dublin county, were dealt with. Some special maps have been prepared for the taking of the census next year. The sales during the twelve months show a net value of 26,357*l.*

LORD TENNYSON CENTENARY MEMORIAL.

A fund of 500*l.* has been opened, and 150*l.* is still needed, for a reparation of the XIVth century parish church of Somersby, Lincolnshire, which will be carried out by Messrs. Thompson & Co., in terms of reports made upon the fabric by the Society for the Protection of Ancient Buildings and Mr. William Weir, the architect. A sum of 100*l.* is set aside for a reproduction in bronze, to be placed in the church, of the bust of the poet by Thomas Woolner, R.A. The church stands close to Lord Tennyson's early home, the rectory-house which his father occupied during many years.

ALKRINGTON ESTATE, MANCHESTER.

A scheme is being formulated to acquire the Alkrington estate of about 700 acres, situated between Manchester and Middleton, from Mr. James Lees, of Biddulph, and his brothers, for its conversion into a garden suburb. Alkrington Hall and its grounds will be preserved; and plans, prepared by Messrs. Pepler & Allen, the architects to the undertaking, provide for the erection of an average of twelve houses per acre, at a minimum cost of from 250*l.* to 500*l.* for each house. Alkrington Hall was the seat of the Lever family; Sir Ashton Lever collected there his celebrated museum, which he sold to Parkinson, by lottery, in 1785.

ROYAL NAVAL SCHOOL, ELTHAM.

Consequently upon the closing of the school, the buildings are about to be vacated, and all the effects will shortly be sold. The Royal Naval School was founded at New Cross about eighty years ago, for the sons of officers of the Royal Navy and Marines. In 1889 the school migrated to Fairy Hill, West Chislehurst Park, near Eltham railway-station, having seventeen acres of land. The house was enlarged and adapted for purposes of the school, and additions were erected for the laboratories, gymnasium, lecture-rooms, swimming-bath, and so on. The designs for the chapel were made by Mr. E. T. Hall.

IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY.

The time for making entries for the London County Council free studentships, to cover all ordinary tuition fees for one year, at the Imperial College, South Kensington, will close on October 1. Twenty-five nominations will be made by the Council, by adjudication (without examination) of the candidates' records and the recommendations of their teachers. Only advanced students who are qualified to enter upon the fourth year of the course should apply—to the Education Officer, L.C.C., Victoria-embankment, W.C.

BRENT GARDEN VILLAGE, FINCHLEY.

Mr. P. Woollatt Home, P.A.S.I., has been appointed architect and surveyor to a society that has been established to acquire, at a price of 10,000*l.* and an annual rent-charge of 60*l.*, and to develop upon co-operative partnership principles, the Brent Lodge estate, covering about twenty-six well-timbered acres, at Finchley, between Mill Hill and Hendon. The plans embrace the retention of the mansion as a central hall and club-house, and the building of 125 houses, and three courts of flats, to be let at rents ranging from 35*l.* to 65*l.*, and from 26*l.* to 45*l.* respectively. Each house will be fitted with a constant hot-water supply, electric lighting, vacuum-cleaning power, etc., and a laundry will be erected: a special feature of the scheme being the provision of a common hall, and kitchen, for meals, cooking, reading, and indoor pastime, with a general staff of servants and cleaners, so as to minimise separate household service in the residential quarters. The secretary to the society is Mrs. Alice Melvin, of 63, Prince's-avenue, Finchley.

LECTURES ON REINFORCED CONCRETE.

A course of lectures on reinforced concrete is to be given by Mr. H. Kempton Dyson, secretary of the Concrete Institute, at the L.C.C. School of Building, Ferndale-road, Brixton. The course has been arranged to provide instruction in both the practice and theory of reinforced concrete construction, and will be divided into two sections, the first being devoted to lectures on construction of reinforced concrete, the quantities for same,

and workshop and laboratory practice; and the second to lectures on theory and design of reinforced concrete. Those desiring to take the full course must show evidence that they possess an ordinary working knowledge of algebra, trigonometry and graphics, or must attend concurrently with this course the lectures on Mechanics of Building and Strength of Materials at the School. Those desirous of studying only the practical side of the subject, such as builders, clerks of works, foremen, and others, may attend the lectures and practice in the first division above referred to. The lectures on construction and quantities will deal with the history and development of reinforced concrete, materials, tools, and appliances, making of concrete, and manufacture of reinforcing steel, centering, the actual work of construction, architectural treatment and finishings, quantity taking, and estimating. The lectures on theory and design will deal with the elasticity of the materials, experimental data, bending moments, sheer stresses, beams, slabs, walls, columns, arches and domes, chimneys, reservoir, tanks, bins, caissons, retaining walls, dams, pipes, sleepers, fence posts, poles, temperature stresses, rules and regulations, and practice in design. Further particulars can be obtained from the Secretary of the School.

FAILURES IN THE BUILDING TRADE.

The annual return made by the Board of Trade on bankruptcies shows that in 1909 the total number of failures in the building and allied trades in England and Wales was 660, and the total liabilities involved were 708,378*l.* These figures were lower than in 1908, when 816 failures produced a total deficiency of 788,320*l.* In 1907 the amount involved was 929,141*l.*; in 1906, 789,408*l.*; and in 1905, which is as far back as the report goes, the total liabilities were 698,517*l.*, in respect of 898 debtors. The figures for 1909 are made up as follows: builders 367, liabilities 533,892*l.*; builders' merchants 17, liabilities 21,104*l.*; brick and tile manufacturers and merchants 6, liabilities 47,848*l.*; bricklayers, plasterers, etc., 30, liabilities 8,947*l.*; carpenters and joiners 61, liabilities 17,825*l.*; decorators, painters, plumbers, etc., 179, liabilities 78,762*l.* Amongst architects and surveyors, the failures during 1909 amounted to twenty-one, the liabilities involved being 41,305*l.* In 1908 the liabilities of these were 78,161*l.* in respect of twenty-eight failures, while 1907 was a very unfortunate year, no less than 246,932*l.* being involved in regard to twenty-six debtors; 1906 and 1905 were again normal, the liabilities being respectively 29,252*l.* and 32,727*l.* The above figures include failures under the Bankruptcy and Deed of Arrangement Acts.

PUBLISHER'S NOTICES.

Nat. Tel., 6112 Gerrard. Telegrams, "The Builder, London."

THE INDEX (with TITLE-PAGE) for VOLUME XCVIII. (January to June, 1910) was given as a supplement with the issue of July 9.

CLOTH CASES for Binding the Numbers are now ready, price 2s. 6d. each; also

READING CASES (Cloth), with Strings, price 9d. each.

THE NINETY-EIGHTH VOLUME of "The Builder" (bound), price Twelve Shillings and Sixpence.

SUBSCRIBERS' VOLUMES, on being sent to the Office, will be bound at a cost of 3s. 6d. each.

CHARGES FOR ADVERTISEMENTS.

COMPETITIONS, CONTRACTS, ALL NOTICES ISSUED BY CORPORATE BODIES, COUNTY AND OTHER COUNCILS, PROSPECTUSES OF PUBLIC COMPANIES, SALES BY TENDER, LEGAL ANNOUNCEMENTS, etc., etc.

Six lines or under ..... 6s. 0d.
Each additional line ..... 1s. 0d.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under ..... 4s. 0d.
Each additional line (about ten words) ..... 0s. 6d.
Terms for series of Trade advertisements, and for front page and other special positions, on application to the Publisher.

SITUATIONS WANTED (Single-handed—Labour only).

Four lines (about thirty words) or under ..... 2s. 6d.
Each additional line (about ten words) ..... 0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

"*" Stamps must not be sent; but all sums should be remitted by Postal Orders, payable to J. MORGAN, and addressed to the Publisher of "THE BUILDER," 4, Catherine Street, W.C.

Advertisements for the current week's issue are received up to ONE p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after TWELVE NOON on that day. Those intended for the Outside Wrapper should be in by TWELVE NOON on WEDNESDAY.

ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, etc., left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

ADVERTISERS in "THE BUILDER" may have *Replies* addressed to the *Office*, 4, Catherine Street, Strand, W.C., *free* of charge. Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage. Unused stamps are returned to advertisers the week after publication.
N.B.—The Reply Boxes are not intended for trade lists, circulars, and the like; should these be received, they cannot (if noticed) be forwarded.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES { NINEPENCE EACH. By post (carefully packed), 1s.

PATENTS.

APPLICATIONS PUBLISHED.*

18,177 of 1909.—Edouard Jules Claude Bérard: Reinforced concrete walls.

18,357 of 1909.—Leonard Pink: Method of making artificial marble and floor and wall coverings.

18,527 of 1909.—Harry William Buddicom: Reinforced concrete structures.

18,537 of 1909.—Gustav Luis: Mixing and grinding machines.

19,247 of 1909.—John Woolcock: Manufacture of so-called concrete blocks, slabs, and pipes.

19,459 of 1909.—Harold Williamson Lake (Pine-street Patents Company): Processes of making cement clinker and apparatus therefor.

22,713 of 1909.—Alexander Bevan: Abrading or surfacing rolls.

30,167 of 1909.—Albert Alonzo Pauly: Apparatus for forming artificial building blocks and pipes.

3,423 of 1910.—Anton Weithaler: Process for the production of a glazed mortar coating on cement goods and walls.

9,833 of 1910.—Société G. Joachim et Cie: Floors, partitions, and the like.

10,202 of 1910.—Friedrich Sochor: Jib crane.

12,076 of 1910.—Heenan & Froude, Ltd., and Lewis Richard Lewis: Propulsion conveyers and screens.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£	s.	d.
Best Stocks	1	12	0
Picked Stocks for Facings	2	10	0

Per 1000, Delivered at Railway Depôt.

	£	s.	d.
Flettons	1	8	0
Best Fareham Red	3	12	0
Best Red Pressed Ruabon Facing	5	0	0
Best Blue Pressed Staffordshire	3	15	0
Do. Bullnose	4	0	0
Best Stourbridge Fire Bricks	3	14	0
GLAZED BRICKS.			
Best White and Ivory Glazed Stretchers	10	17	6
Headers	10	7	6
Quoins, Bullnose, and Flats	14	7	6
D'ble Stretchers	16	7	6

	£	s.	d.
Double Headers	13	7	6
One Side and two Ends	17	7	6
Two Sides and one End	18	7	6
Splays & Squints	15	17	6
Best Dipped Salt Glzd. Str'tch'rs	10	17	6
Headers	10	7	6
Quoins, Bullnose, and Flats	14	7	6
D'ble Stretchers	16	7	6
Splays & Squints	15	17	6

Second Quality White and Dipped Salt Glazed, £1 5s. per 1000 less than best.

	s.	d.	
Thames and Pit Sand	6	6	per yard delivered.
Thames Ballast	5	0	" "
Best Portland Cement	28	0	per ton, "
Best Ground Blue Lias Lime	19	0	" "

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 11s. 6d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

Per Ft. Cube.	s.	d.
BATH STONE—delivered on road waggons, Paddington Depôt	1	6½
Do. do. delivered on road waggons, Nine Elms Depôt	1	8½
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	1
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	2½

Per Ft. Cube, Delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	10	Red Corsehill in blocks	2	2
Beer in blocks	1	6	Closeburn Red Freestone	2	0
Greenshill in blocks	1	10	Red Mansfield Freestone	2	4
Darley Dale in blocks	2	4			

YORK STONE—*Robin Hood Quarry.*

Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	3	
6 in. rubbed two sides ditto, ditto	2	6	
3 in. sawn two sides slabs (random sizes)	0	11½	
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7½	
1¼ in. to 2 in. ditto, ditto	0	6	
HARD YORK—			
Per Ft. Cube, Delivered at Railway Depôt.			
Scappled random blocks	3	0	
Per Ft. Super., Delivered at Railway Depôt.			
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8	
6 in. rubbed two sides ditto	3	0	
3 in. sawn two sides slabs (random sizes)	1	2	
2 in. self-faced random flags	0	5	

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20 × 10 best blue Bangor	13	2	6	20 × 10 1st quality ditto	13	0	0
20 × 12 ditto	13	17	6	20 × 12 ditto	13	15	0

* All these applications are in the stage in which opposition to the grant of a patent upon them can be made.

SLATES (*continued*).

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
16 × 8 ditto	7	5	0	18 × 10 ditto	13	5	0
22 × 10 best blue Portmadoc	12	12	6	16 × 8 ditto	10	5	0
16 × 8 ditto	6	12	6	20 × 10 permanent green	11	13	6
20 × 10 best Eur'ka unfading green	15	17	6	18 × 10 ditto	9	12	6
20 × 12 ditto	13	7	6	16 × 8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Rosemary" brand plain (per 1000)	48	0
Hip and Valley (per doz.)	3	7	Best Ornamental (per 1000)	50	0
Best Broseley (per 1000)	50	0	Hip (per doz.)	4	0
Do. Ornamental (per 1000)	52	6	Valley (per doz.)	3	8
Hip and Valley (per doz.)	4	0	Best "Hartshill" brand, plain sandfaced (per 1000)	50	0
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57	6	Do. pressed (per 1000)	47	6
Do. Ornamental (per 1000)	60	0	Do. Ornamental (per 1000)	50	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6
Best Red or Mottled Staffordshire do. (Peakes) (per 1000)	51	9	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental do. (per 1000)	54	6	Hand-made sandfaced (per 1000)	45	0
Hip (per doz.)	4	1	Hip (per doz.)	4	0
Valley (per doz.)	3	8	Valley (per doz.)	3	6

WOOD.

BUILDING WOOD. At per standard.	£	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	...	15	10	0
Deals: best 3 by 9	13	10	0	...	14	10	0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	10	0	...	12	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.			
Deals: seconds	1	0	0	less than best.			
Battens: seconds	0	10	0	" "			
2 in. by 4 in. and 2 in. by 6 in.	9	10	0	...	10	10	
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	...	10	0	
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0	"			
Fir timber: best middling Dantzig or Memel (average specification)	At per load of 50 ft. 5	0	0	...	5	10	0
Seconds	4	10	0	...	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	...	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	...	3	10	0
Swedish balks	2	12	6	...	3	0	0
Pitch-pine timber (30 ft. average)	4	10	0	...	5	5	0
JOINERS' WOOD.	At per standard.						
White Sea: first yellow deals, 3 in. by 11 in.	24	10	0	...	25	10	0
3 in. by 9 in.	22	10	0	...	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0	0
Second yellow deals, 3 in. by 11 in.	19	0	0	...	20	0	0
" " 3 in. by 9 in.	18	0	0	...	19	10	0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	...	15	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	1	10	0	...	12	10	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	...	22	10	0
Do. 3 in. by 9 in.	18	10	0	...	19	10	0
Battens	14	0	0	...	15	0	0
Second yellow deals, 3 in. by 11 in.	16	10	0	...	17	10	0
Do. 3 in. by 9 in.	15	0	0	...	16	0	0
Battens	11	10	0	...	12	10	0
Third yellow deals, 3 in. by 11 in.	13	10	0	...	14	10	0
Do. 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15	0	0	...	16	0	0
" " 3 in. by 9 in.	14	0	0	...	14	10	0
Battens	11	10	0	...	12	10	0
Second white deals, 3 in. by 11 in.	14	0	0	...	15	0	0
" " 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
Pitch-pine: deals	19	0	0	...	21	0	0
Under 2 in. thick extra	0	10	0	...	1	0	0
Yellow pine—First, regular sizes	44	0	0	upwards.			
Oddments	32	0	0	"			
Seconds, regular sizes	33	0	0	"			
Oddments	28	0	0	"			
Kauri Pine—Planks, per ft. cube	0	3	6	...	0	5	0
Dantzig and Stettin Oak Logs— Large, per ft. cube	0	3	0	...	0	3	9
Small " "	0	2	6	...	0	2	6
Wainscot Oak Logs, per ft. cube	0	5	6	...	0	6	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	8½	...	0	0	9½
¾ in. do. do.	0	0	7	...	—		
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0	0	10	...	0	1	1
Selected, Figury, per ft. super as inch	0	1	6	...	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1	0
Teak, per load	18	0	0	...	22	0	0
American Whitewood Planks, per ft. cube	0	4	0	...	0	5	0
Prepared Flooring, etc.—	Per square.						
1 in. by 7 in. yellow, planed and shot	0	13	6	...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15	
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13	6
1 in. by 7 in. " "	0	14	0	...	0	15	0
¾ in. by 7 in. white " "	0	10	0	...	0	11	0
1 in. by 7 in. " "	0	12	9	...	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections	7 0 0	...	7 10 0
Compound Girders, ordinary sections	9 0 0	...	10 0 0
Steel Compound Stanchions	11 0 0	...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 0 0	...	10 0 0
Flitch Plates	9 0 0	...	9 10 0
Cast Iron Columns and Stanchions including ordinary patterns	7 10 0	...	8 10 0

METALS.

	Per ton, in London. £ s. d.		£ s. d.
IRON—			
Common Bars	8 10 0	...	9 0 0
Staffordshire Crown Bars, good merchant quality	8 15 0	...	9 5 0
Staffordshire "Marked Bars"	10 10 0	...	—
Mild Steel Bars	8 15 0	...	9 5 0
Hoop Iron, basis price	9 5 0	...	9 10 0
" " Galvanised	17 0 0	...	—
("And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	9 15 0	...	—
" " 24 g.	10 15 0	...	
" " 26 g.	12 5 0	...	—
Sheet Iron, Galvanised, flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	...	—
Ordinary sizes to 22 g. and 24 g.	15 10 0	...	—
" " 26 g.	16 10 0	...	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	18 0 0	...	—
" " 22 g. and 24 g.	18 10 0	...	—
" " 26 g.	20 0 0	...	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	14 10 0	...	—
22 g. and 24 g.	14 15 0	...	—
" " 26 g.	16 5 0	...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 0 0	...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 0 0	...	—
" " " 26 g.	15 0 0	...	—
Cut Nails, 3 in. to 6 in.	10 10 0	...	11 0 0
(Under 3 in., usual trade extras.)			

LEAD, &c.

	Per ton, in London. £ s. d.		
LEAD—Sheet, English, 4lb. and up	16 0 0	...	—
Pipe in coils	16 0 0	...	—
Soil-pipe	19 10 0	...	—
Compo pipe	19 10 0	...	—
ZINC—Sheet—	In casks of 10 cwt.		
Vielle Montagne	28 12 6	...	—
Silesian	28 5 0	...	—
Zinc, in bundles, 1s. per cwt. extra.			
COPPER—			
Strong Sheet per lb.	0 1 0	...	—
Thin " "	0 1 1	...	—
Copper nails "	0 0 10	...	—
Copper wire "	0 0 10	...	—
BRASS—			
Strong Sheet "	0 0 11	...	—
Thin "	0 1 0	...	—
TIN—English Ingots "	0 1 6	...	—
SOLDER—Plumbers' "	0 0 7	...	—
Tinmen's "	0 0 9	...	—
Blowpipe "	0 1 0	...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3d.
" fourths	1¼d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4¼d.
" fourths	2¼d.	Fluted Sheet, 15 oz.	3¼d.
26 oz. thirds	4d.	" 21 oz.	4¼d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

Hartley's	2d.	Figured, Rolled, & 'Oceanic'	Oxford
⅛ "	2¼d.	Glass, white	3¼d.
¼ "	2⅝d.	Ditto, tinted	5d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 6
" " " in barrels	"	0 3 7
" " " in drums	"	0 3 10
Boiled " " in barrels	"	0 3 10
" " " in drums	"	0 4 1
Turpentine in barrels	"	0 4 2
" in drums	"	0 4 4
Genuine Ground English White Lead	per ton	20 10 0
Red Lead, Dry	"	20 0 0
Best Linseed Oil Putty	per cwt.	0 10 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday*. [N.B.—We do not publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

CHESHAM.—For private street works, for the Urban District Council, Mr. Percy C. Dormer, Engineer and Surveyor, Council Offices, Chesham:—

	Khartoum-avenue.		Addison-road.
J. C. Trueman, Ltd.	£800 0 0	....	£225 0 0
A. Mead & Son	550 0 0	....	160 0 0
W. W. Freeman	522 0 0	....	149 0 0
W. Wright	461 12 7	....	137 10 0
F. G. Brummell	424 5 9	....	‡120 17 5
E. Free & Sons	420 0 0	....	129 0 0
W. J. Green & Co., Aylesbury	*415 10 0	....	*123 10 0

‡ Tender withdrawn.

CUDDINGTON.—For making-up Moreton-road and Windsor-road, for Epsom Rural District Council. Mr. T. E. Ware, surveyor, Waterloo-road, Epsom:—

Moreton-road.

J. C. Trueman, Ltd.	£595	S. Kavanagh & Co., Surbiton-hill*	£447
J. May & Son	495		
M. Thacker & Co.	485		

Windsor-road.

J. C. Trueman, Ltd.	£190 0	S. Kavanagh & Co., Surbiton-hill*	£137 0
J. May & Son	177 10		
M. Thacker & Co.	140 0		

DRIFFIELD.—For erecting dwelling-house, for Mr. J. F. Robinson. Mr. Joseph Shepherdson, architect, 8, Quay-road, Bridlington:—

Brickwork: A. Leason	£358 0 0
Woodwork: J. E. Julian	168 7 6
Plumbing: T. W. Stabler	78 15 0

[All of Driffield.]

HONINGTON (Shipton-on-Stour).—For alterations and additions to Honington Lodge, for Sir Grey Skipwith, Bart. Mr. C. M. C. Armstrong, architect, Warwick:—

Foster & Dickson	£1,890 0 0	T. Broad & Co.	£1,595 0 0
J. H. Cashmore & Sons	1,820 0 0	W. J. Whittall & son	1,589 0 0
R. Bowen's Exors.	1,735 0 0	G. F. Smith & Sons	1,494 0 0
A. Groves & Sons	1,667 0 0	Collins & Godfrey, Tewkesbury*	1,488 0 0
F. Hollowell	1,618 0 0		
J. G. Fincher & Co.	1,596 15 6		

MERTON.—For making-up Burlington-road, for the Urban District Council. Mr. G. Jerram, Surveyor:—

Kavanagh & Co.	£3,597	E. & E. Iles, Wimbledon*	£3,29[illegible]
Mowlem & Co.	3,482		

PORTHCAWL.—For constructing cast-iron pipe sewer, for the Urban District Council. Mr. A. S. Lilley, A.M.Inst.C.E., Engineer and Surveyor, Council Offices, Porthcawl:—

E. H. Page	£264 1	Johnson Bros.	£207 15
W. & J. R. Watson	242 0	R. Rankin, Porthcawl*	196 18
G. Thompson Ltd.	240 0		

[Surveyor's estimate, £197 4s. 8d.]

SHREWSBURY.—For heating by low-pressure hot-water the Atcham Secondary School, for Salop Education Committee. Messrs. Shayler & Swan, architects, 16, Pride-hill, Shrewsbury:—

R. Alger & Sons, 39, High-street, Shrewsbury.. £385

STURMINSTER NEWTON.—For constructing sewers, etc., at Butt's-pond and Gott's-corner, for Rural District Council. Mr. G. F. Hazell, Surveyor to the Rural District Council, Sturminster Newton. Quantities by Surveyor:—

Wort & Way	£138 0 0	M. Loader	£1 8 15 0
R. Clarke	130 0 0	H. Tryborn	103 13 0
Williams, Farley, & Co.	125 19 6	Hayward & Son, Okeford Fitzpaine and Blandford*	101 3 0
G. Maidment	122 18 2		
W. Inkpen	109 7 0		

[Surveyor's estimate, £120.]

SWAILSFORD.—For the erection of the two Swallow-ford bridges, situate at the boundary of the parishes of Cornwell and Churchill, for Chipping Norton Rural District Council. Mr. R. Entwistle, Surveyor to the Council, Charlbury:—

S. Lewis..... £226 | H. A. Tolly, Bladon*. £191

WHITBY.—For Eastrow sewerage and sewage disposal works, for the Rural District Council. Messrs. Fairbank & Son, C.E., Lendal-chambers, York:—

Brumby, Robinson, & Son, Hull* .. £828 13 11

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(Incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Company (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to the Forth Bridge Co.

SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
4 & 5, East Harding-street, Fetter-lane, E.C.

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE,
WHITE SILICA PAVING.
SEYSSEL ASPHALTE (*Direct from the Mine*).

EWART'S
"EMPRESS"
Established 1834.
Telephone: 2570 North.
Cures in 19 cases out of 20.
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
SMOKE-CURE